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ORAL SEPSIS.

In these days of extreme antiseptic care it sometimes happens that a surgeon will have a series of most unfortunate results. Patients will die with all of the symptoms of sepsis, and yet the operator will assume to have used every care. Indeed, so far as attention to his hands, instruments, solution, attendants, the patient and the room, he has left nothing undone. It is probable that the patient was in the average condition of strength and recuperative power, and that the operation was not extremely dangerous.

Dr. Hunter, of London, has recently written a monograph upon oral sepsis, which is suggestive. It is true that he studies this subject in its causative relation to gastritis, toxic neuritis and other septic conditions, but surely his field can be greatly enlarged. If, as he seems to prove, from local infection, such as dental caries, tonsilitis, pharyngitis and ozena, there may result a general auto-infection, is it not more than possible that many cases of sepsis may be the result of infection conveyed by the breath of the operator to the open wound of the patient?

This opens up a very serious question. One of the most accomplished surgeons the writer has known had a most offensive breath from long-standing chronic pharyngitis. His results in certain operations were most disappointing—many of his patients dying from sepsis. We have seen scales of dandruff fall from the head of an operator, and drops of perspiration from his face, into an abdominal cavity. His hands were scrupulously clean, but his head and face doubtless contained many germs.

We are neither captious nor critical, but we insist that the guarding of the patient from the danger of infection from the breath and other carriers for infection from the operator is not a small one. And it is all so easily prevented. A towel around the head; a mask covering all the face but the eyes, readily made and easily adjusted; these or similar appliances would undoubtedly be additional safeguards in all important operations.

A TYPHOID-LIKE BACILLUS CAUSING A TYPHOID-LIKE FEVER.

Typhoid fever is protean in its manifestations, in its onset and in its decline. Yet so far as the writer knows we have had no cases in this country of a disease which has been reported from Bremen, Germany. In the *Deutsche medicinische Wochenschrift*, Nos. 30 and 31, 1901, Kurth reports five cases of a disease which resembles typhoid fever very much and which he believes is caused by a hitherto undescribed micro-organism, the bacillus bremensis febris gastricæ. The cases reported show clinical histories not unlike those of genuine typhoid fever. Temperature curves are parallel to those of typhoid fever. There was present even the roseola of typhoid. The urine contained albumen and showed the diazo reaction. Withal, the cases were benign cases, all ending in rapid recovery.

The bacillus which was found in these cases closely resembled the bacillus typhosus. It grew similar to the bacillus typhosus on gelatin plates. It did not liquefy gelatin. It clouded broth in twenty-four hours, with the formation of a pellicle afterwards. It gave no indol reaction. It did not stain according to Gram. It produced gas: a point of difference with the typhoid bacillus. It produced acid in media. Furthermore, it clumped in the presence of blood from these cases of typhoid-like fever. It is noteworthy that this clumping took place quickly even in the presence of a dilution of 1 to 100. All in all, the bacillus resembled very closely the bacillus enteridis of Gärtner.

The disease, while it resembled typhoid fever very much, took on the characteristics of what Kurth calls "gastric fever." He surmises that the disease may have been epidemic in Bremen at the time that he saw the five cases reported, which were brought to the hospital. There were over one hundred and fifty cases of typhoid fever in Bremen in that season, and it is not improbable that some of those which went for typhoid fever were really cases of this disease. The disease probably bears somewhat of a relationship to typhoid fever because it resembles it clinically, and secondly because the bacillus bremensis febris gastricæ appears to be a variety of the same family to which the bacillus typhosus belongs. Kurth said, moreover, that at times blood from these cases showed a slight reaction in contact with typhoid bacilli.

SUBSTITUTION IN PRESCRIPTIONS.

We have been asked to say a word on this subject. There is no word in the English language sufficient. It is the vilest, the most reprehensible,

the lowest and meanest of all mean acts. It is a breach of trust; it is selling goods under false pretense; it is more than stealing.

A patient comes to a physician for the best advice and the most effective medication. He needs it and pays for it. The physician, after investigating the case, gives him an order for certain drugs which he believes suitable to that particular case. By so doing he puts his own reputation and the highest welfare of the patient into the hands of the druggist. In all honor and honesty the druggist should fill that prescription as it is written. If he cannot, he should refuse to fill it or notify the physician.

How often is this confidence violated! A $40 drug clerk may, for the sake of a few cents' profit, nullify the work of the physician, injure his reputation and do infinite harm to the patient.

We believe that substitution is on the increase. Physicians can stop it if they will. It is proposed to have united action all over the country. In some places physicians have agreed to file a list of druggists found guilty with the secretary of the local medical society. It would be just, perhaps, to always notify suspected druggist.

The writer has a list of all the druggists in the city. When there is evidence of substitution by any one, the red line drawn underneath the name means "no more chances in that store."

It is our own fault if we are cursed with this evil, and we have the remedy at hand.

CHANGES IN THE PANCREAS IN DIABETES MELLITUS.

The association of lesions of the pancreas and diabetes mellitus has been frequently noted. Minute study of such cases has never been productive of general conclusions. It has been the rule, however, that when the pancreas shows changes in cases of diabetes mellitus, that change consists in a chronic interstitial inflammation. Eugene Opie, of the Johns Hopkins Medical School, has recently described a case of diabetes in which the pancreas showed sharply circumscribed areas in which between the capillary wall and the parenchymatous cells hyaline material had been found. In a case which he reports in the *Johns Hopkins Hospital Bulletin* for August, 1901, most important findings are described by him. The case was one of diabetes mellitus in a negress, the urine showing from 4 to 5.4 per cent. sugar. Microscopical examination showed that in almost every island of Langerhans there was a homogeneous hyaline material replacing the epithelial cells. It stained deeply with acid dyes, eosin and picric acid. Transitions between the granular nucleated cells and these homogeneous hyaline particles were found. Where the process was more advanced, the cells of the island were more or less wholly transformed, and there occurred small, round or oval masses of hyaline material, penetrated by the remains of capillaries whose endothelial cells finally disappear. The secreting parenchyma was unaffected by the lesion described.

This case, therefore, shows a lesion of the islands of Langerhans

alone, in a case of diabetes mellitus. Opie says that diabetes mellitus, when the result of a lesion of the pancreas, is caused by destruction of the islands of Langerhans and occurs only when these bodies are in part or wholly destroyed.

ANOTHER CHAPTER ON THE ILLUSIONS OF PATHOLOGY — SCHÜLLER'S CANCER PARASITE.

The medical profession is ever struggling to solve intricate problems of etiology. One problem which is receiving quite a good deal of attention is that of the nature of cancer. From time to time divers microorganisms have been brought to the notice of the profession by ardent investigators, each of whom has enthusiastically announced that he has found the long-sought-for parasite. Gaylord thought he had found it, but his work has not been very graciously received by his fellow-workers, inasmuch as it lacks scientific method and positive results. The very latest exhibition of enthusiasm (minus scientific thought) is that evinced in the lately appearing book by Prof. Schüller, of Berlin, on the parasite of cancer. In this book Schüller sets forth that he has found a parasite in cancer; that he is able to demonstrate it not only in fresh specimens, but also in any preparation of cancer which has been lying in alcohol in a pathologic museum for years.

Völcker, of the Heidelberg Surgical Clinic, undertook to investigate this "parasite" in cases of cancer. His investigation is set down by himself in a rather humorous manner in the *Deutsche medicinische Wochenschrift*, No. 30, 1901. Völcker searched high and low for the parasite, but for the life of him he could not find it. Schüller described them in his book as very large, gold-brown spheres, with clear membranes showing radiating pores. Some of the membranes seem to be empty, the "young form of the parasite" having escaped therefrom. After assiduous search, Völcker took a bottle containing bergamot oil which had been standing in the laboratory some time and touched the cork stopper to a cover glass, which was then examined under the microscope and found to be full of the "parasites" described by Schüller! It may here be stated that Schüller said in his work that the addition of a drop of bergamot oil to any specimen of cancer to "clear it up" would show the cancer parasites.

The explanation was thus ingeniously found by Völcker: the cancer parasites described by Schüler were merely oil droplets, while the large, empty capsules were cork cells. Schüller stated that his cancer parasites were resistant to all acids, potassium hydrate solution, etc. This agrees with what Zimmermann has said in his *Botanische Mikrotechnik:* "Cork membranes are not soluble in strong acids or in potassium hydrate solutions, nor do they stain with iodine." So it seems that the discovery is no discovery at all, but merely the detailed description of an antefact. Corroborative evidence of the work of Völcker is also to be found in the

Muenchener medicinische Wochenschrift for August 15th, where Hauser reviews Schüller's work and states that he too made the discovery that these are parasites of "cork."

THE PREVENTION OF THE SPREAD OF DISEASE BY RATS.

Rosenau, of the U. S. Marine Hospital Service, has issued a report on his work with the substance known as Danyz's virus applied to the destruction of rats. It is now definitely known that rats are the carriers of some epidemic diseases, notably the bubonic plague. Acting on this conviction, J. Danyz described a new method for the destruction of these disease-breeding rodents (*Annales de l'Institute Pasteur*, April, 1900) by means of cultures of a certain bacillus. This bacillus he obtained from a spontaneous epidemic among harvest mice and by means of complicated and artificial methods he managed to increase its virulence so that it became pathogenic for the several species of rats.

The great drawback to the practical utility of the "rat virus" is the fact that it rapidly attenuates, and, secondly, the resistance of the rats seems to increase when it is used upon them. This renders its usage as an agent for the wholesale destruction of rats rather limited. Rosenau's work was carried out with the idea of ascertaining just what value the virus has for the killing of rats. After many experiments he concludes that the virus, which is chemical poison, has feeble power of propagating itself from rat to rat. It therefore cannot produce a wide-spread epizootic among these rodents. In practical use it must be spread around so that many rats can get it.

The virus differs from most chemical poisons in that it is harmless for man and many of the domestic animals. It has the great disadvantage that chemical poisons do not possess, of rendering the animals immune by the ingestion of amounts that are insufficient to kill, or by the ingestion of cultures that have lost a little of their virulence. In the experiments made by Rosenau, less than half the number of rats fed were killed (46 out of 115). The conditions in a cage are so much more favorable for the fatal action of the virus than could possibly be the case in nature, that it is safe to assert that a less number would succumb in a wild state. *Ergo*, the virus is far from a sure means of exterminating rats in a particular place.

INSANITY IN BANK OFFICIALS AND BANK FAILURES.

It is noteworthy that recently several banking institutions have been practically wrecked through the squandering away of the funds entrusted to them by their cashiers who were afflicted with well-advanced paretic dementia. A Poughkeepsie bank cashier was suddenly noticed to become very extravagant. This led to an investigation and a defalcation was found. On examining the cashier's house, notes, drafts and money were found scattered over it, hidden in out-of-the-way places, in some cases

evidently for several years. The man was found to be afflicted with well-marked paretic dementia and was committed to an insane asylum.

Now, an important question leading up to these circumstances is that discussed in the *Alienist and Neurologist* for July, 1901—*i. e.*, the question of taking the evidence of non-medical persons as final in the passing on a given individual's sanity. It is reasoned that if, in cases of this kind, bank officials are daily in touch with their cashiers and fail to detect palpable evidences of the existence of such a well-marked disease as paretic dementia, how can we accept the evidence of laymen whose only interest in given individuals is purely personal? One would judge that if laymen fail to detect insanity in individuals who are concerned with their most vital interest, namely pecuniary interest, they are in no way capable of passing on the insanity of people whom they observe but casually. If keen business men fail to find evidences of insanity in cases where their interests are deeply concerned, how little value can be attached to their negative evidence in cases where their personal interests are not concerned, but where life or death or personal property are at stake. It is utterly absurd for courts of justice to accept the negative evidence of the laity on a given case of insanity, when we know of instances of this kind in which they fail to detect a form of insanity which to the medical mind is plain.

THE FILTERS SUPPLIED TO THE TROOPS IN SOUTH AFRICA.

The *Lancet* for August 10, 1901, discusses editorially the merits of the filters supplied to the troops in South Africa. It seems that they were supplied with filters for the purification of their drinking water, and that tests showed that these filters were permeable for bacteria, notably the typhoid bacillus. It seems that the troops, relying on the efficacy of these filters, drank the water supplied to them with a false sense of security. Hence, typhoid fever and other intestinal troubles were flourishing right through the campaign.

The problem of supplying troops in the field with a purified drinking water is a difficult one, but it seems to us, in the light of present knowledge on the subject, that the War Office was grievously in error in supplying an army in the field with portable filters for the purification of their drinking water. The model used was probably of the domestic filter type commonly used in the households of this country. We have but little confidence in these filters for the removal of pathogenic bacteria. They are excellent clarifying agents, but poor bacteria-removers. It was absurd for the War Office to countenance the use of such instruments. It was almost criminal for the medical men—if such is the case—who advocated the use of these filters. Far better would it have been had the drinking water been *boiled*. We are sure that boiling water kills bacterial life; we are not sure that filtering water removes them. From a scientific, economic and practical standpoint, boiling the water would

have been the measure of choice in this case. Some one has blundered again, and some one should bear the blame for the lives needlessly sacrificed for this blunder. The scientific world struggles with painstaking efforts to make propositions of this kind clear to the "powers that be" and then, behold, their directions are disregarded and, as the showman would say "a spectacular tragedy" takes place. We say again, let us place no blind faith in filtration of water. We say again, there never was a filter, either on a domestic or large scale, which removed every bacterium in a given supply. But it is a fact that boiling water kills bacterial life. Why, then, should there be any doubt as to the choice?

DIFFERENTIAL DIAGNOSIS BETWEEN TYPHOID FEVER AND APPENDICITIS.

We have heard much concerning the differential diagnosis of appendicitis and right-sided pyosalpinx and other conditions found in the right iliac fossa, but we have heard comparatively little concerning the differentiation of typhoid fever from inflammatory conditions about the appendix vermiformis. A rather unique form of typhoid fever it must be that would simulate appendicitis, and yet this *does* occur. We are in receipt of a communication from our good friend, Dr. Richard Mühsam of the Moabit Hospital, of Berlin, in which he details a case of typhoid fever that simulated appendicitis so closely that operation for that disease was done. The history of the case was not at all suggestive of typhoid fever, the most conspicuous deviation from the regular type of the disease being its beginning with a severe chill. Then again, the facial aspect, the roseola and diarrhea was absent. Pain, tenderness and a sensation of a mass in the right iliac fossa at McBurney's point pointed to appendicitis. At the same time there was no diazo reaction and no splenic tumor. In short, the case was an extremely atypical one, and the probable diagnosis of appendicitis was made; operation was performed and the true state of affairs immediately discovered. An ulcer was found which seemed to be quite near the serosa so that a row of sutures was placed in the gut at this point. The appendix vermiformis was quite normal. The abdomen was sewn up. The later course of the disease was uneventful, the patient going through the attack successfully. On the eleventh day the Widal reaction showed a positive microscopic result, but no macroscopic reaction. Roseola and splenic tumor later developed. Diazo reaction continued to be present.

This case is an extremely important one, because it touches on a point upon which not much stress has hitherto been made, namely, the probability of some cases of atypical typhoid fever being simulative of appendicitis and operated upon for that disease. The case reported by Mühsam went on to recovery, but a similar case reported by Rendu succumbed to the malady. It might be well for all practitioners to bear this case in mind at the present time, when typhoid fever is making its annual visit with us.

FORMIC ALDEHYDE IN THE TREATMENT OF TUBERCULOSIS.

The field of usefulness of formic aldehyde seems to have no limit. Its usage in histological work at first seemed to be its chief plea for remaining on our shelves; then began its use in disinfection work whereby singularly effective results were obtained. No other important use was found for it until Dr. Green, of Salisbury, advocated the treatment of throat and lung diseases—especially pulmonary consumption—by inhalation of formaldehyde. Since his first published observation in this regard others have come to the front with statements that good results could be obtained in incipient phthisis by such inhalations. The most startling communication, however, is that made recently in the *Philadelphia Medical Journal* (August 31, 1901) by Dr. Crowry Muthu, of St. Lawrence. This observer reports his results with inhalations of formic aldehyde as an aid in the open-air treatment of pulmonary tuberculosis. He reports fifteen cases which were under his observation for three to five months. All of them were patients who took the open-air treatment in Muthu's sanitarium for from six to eleven months. No other medication was taken by them other than the formaldehyde inhalations. The results obtained are briefly these: five were completely *cured* (italics ours). The writer states that neither physical signs nor tubercle bacilli were present at the end of treatment (it is presumed that both were present prior to treatment). Seven were "almost" cured, a few crepitations and bacilli remaining when they left the sanitarium, but since then they have all continued in good health. One patient was but slightly benefited. Two patients were not appreciably helped.

These results are truly remarkable, if we take the same stand that Muthu does—*i. e.*, that the good effects seen were attributable mainly to the formic aldehyde inhalations. At the same time we must bear in mind that each one of these patients had the benefit of the general open-air treatment, given in a well-equipped sanitarium. We may take the view that the maximum amount of good was achieved through general open-air treatment, the minimum being received from the medicated inhalations. This is an extremely conservative estimation, and in the light of that fact we cannot urge too strongly the necessity for others who are occupied with the sanitarium treatment of tuberculosis to follow in these lines and publish their results. From a purely theoretical standpoint, inhalations of formic aldehyde are indicated in the treatment of a disease of the nature of pulmonary phthisis. Such results demand repeated trials on the part of others. In the paper quoted not much information is to be gleaned from the *status præsens* of the patient prior to treatment as to the extent of pulmonary tissue involved, etc., but the remarkable findings at the close of treatment may mean much to those of us who are fighting with the great foe—tuberculosis.

ORIGINAL ARTICLES.

NEURASTHENIA.

By Sanger Brown, M. D., of Chicago.

IT MAY be assumed that in health the neurons are all the time appropriating from the vital fluids circulating among them an organic substance which, in passive states, is utilized in maintaining in them a condition of tone or latent energy, and which during activity enables them to render this energy properly manifest.

In the discussion of this particular phase of neuro-physiology, it would be eminently convenient and conducive to clearness, in my opinion, if some single term were available satisfactorily descriptive of this substance; and, accordingly, for this purpose I have ventured to coin the word neurenergen,* which I would define as an ultimate form of organic matter contained in the neuron through whose agency it is convertible into waste products and the various manifestations of nervous energy peculiar to its structure. It bears, indeed, much the same relation to neuro-physiology that lines and points bear to mathematics, each representing a mere concept. When, however, the vast benefit which has accrued to general medicine from the germ theory and to neurology from the neuron doctrine is remembered, toleration and perhaps even respect for a mere hypothesis may be entertained.

Let me now invite attention to figure 1: "a" represents a motor cell from the lumbar region of the spinal cord of a dog which had not recently taken any considerable exercise; while "b" represents a cell from the same part after fatigue. Here, it is fair to assert that there has been a discharge of energy coincident with a metamorphosis—apparently retrograde—of cell contents; essentially, in fact, of the substance which I have named neurenergen.

It is admissible, I think, to transfer the doctrine which these figures teach to neuron bodies or nerve cells generally, no matter what their peculiar function may be. Thus I recently made the following observation: two well-matched and skillful chess players, between whom there was a wholesome rivalry, sat down to a contest at two and played steadily till five-thirty, each one in the meantime exercising all the intellectual concentration of which he was capable. During the first twenty minutes the calculations were rapid, sound and far-reaching. At about the close of the seance a marked decline in the character of the play was only too obvious. Pieces were left directly exposed for several consecutive moves, and even the most patent possible check was overlooked by both players. That the

* Derived through the Greek from *neuron*, nerve; *ergon*, work; and *genesis*, source.

neurons concerned in the prolonged intellectual struggle had undergone changes similar to those delineated in the figure is, in my opinion, a not unreasonable supposition. It is not claimed for a moment, however, that the figures here shown afford anything like an identification or demonstration of this substance. They are merely intended to give color and support to the hypothesis; and, in my opinion, this they do.

Without wishing to express disapproval of the idea I shall, for the present, ignore all contention implying that any fixed anatomical elements outside the neurons participate materially in the immediate development of nervous energy.

According to the foregoing concept, then, there is in health a current of neurenergen constantly flowing into the neurons, which is no less constantly transformed by them into energy and waste products. This current is at its minimum during repose, and at its maximum during activity; and, furthermore, subject, no doubt, to wide individual differences, there must be an available neurenergenetic reserve which may be drawn upon as occasion demands.

I shall not now attempt the further general development of this doctrine, but merely suggest, in passing, that it offers a rational explanation for many morbid nervous phenomena besides those now under discussion, notably those of epilepsy and the tremors; while it finds application in conditions as widely separated as the toxic and toxemic paralyses and insanity.

To make a special application of this doctrine, it may be postulated that in neurasthenia, on account of overstimulation, the neurons giving rise to the symptoms have lost, to a considerable extent, their recuperative power; that there is, in fact, a standing deficit in their neurenergen and that they remain, therefore, in some degree permanently in the condition of the cell shown in "b." Or, in other words, inasmuch as the salient feature of neurasthenia consists rather in the inability to sustain motor or mental effort than in derangement or disorder of the energy produced, the cause of the symptom may be more reasonably referred either to a deficiency of the available supply of the neurenergen or to weakness of the neurons, whereby they are unable to continue its proper metamorphosis, than to some abnormal quality of these elements, as may be assumed to exist in epilepsy, for instance, where the neurenergen, on account of a morbid chemical alteration, may undergo a very sudden change, almost akin to explosion.

Clinical experience, moreover, would appear to some extent to endorse this view of the pathology, because some sort of excitement of the neurons, which might be expected to produce in them a condition of more or less permanent exhaustion, appears to be the most potent cause of the disease, while tranquillity rather than drugs or nutritional measures is the first essential of successful treatment.

The exciting cause, then, may be looked for in those influences which

demand an exhaustive expenditure of nervous energy beyond the capacity of coincident and consecutive restoration or repair. Within the limits of this paper these can only be referred to in the most general terms. However, it is readily perceived that they are all the time rapidly increasing in professional, business and social life. The march of scientific progress is so rapid that the professional man has to maintain a high state of mental tension in order to keep pace with it, notwithstanding the mitigation afforded by specialism.

Refinements in business methods, with the development of devices providing means of constant intercommunication, expose the business man to incessant drafts upon his capital of nervous energy; while keenness of competition, the added responsibility of success, as well as the anxiety and depression incident to failure, all contribute to neurenergenetic bankruptcy. Indeed, in this connection the excessive indulgence in secret vice, as illicit venery, sometimes practiced by the overworked business or professional man, might consistently be termed neurenergenetic defalcation or, in lesser degree, peculation. But if the increasing complexities of modern civilization offer a menace to the neurons of business and professional men which may fairly excite concern, what shall be said of their effect upon the neurons of the modern society woman, with her perpetual breakfasts, luncheons, receptions and card parties; her clubs with their educational, municipal and philanthropic departments? And even under the weight of these great burdens, yielding to primitive impulses, she may attempt to divert some energy to the family circle, as, for instance, personal supervision of the house-keeping, the training and education of her children, etc. In her efforts to meet all these demands, besides many others which I have not enumerated, her liability to neurasthenia is positively alarming, and accordingly, sooner or later, she is likely to register at a rest-cure.

Some of the severest cases of neurasthenia develop rather rapidly after an emotional or physical shock, and when these causes act coincidently their influence is powerfully intensified. The symptoms supervene sometimes within a few hours, sometimes within a few days or weeks of the exciting cause. There may or may not be some local demonstrable tissue injury, as contusion or fracture. Railroad accidents furnish conditions peculiarly favorable to the united action of these causes, and on account of the volume of railroad travel they contribute largely to the list of these cases.

Inasmuch as the symptoms of neurasthenia are in any event mainly subjective, it is many times well-nigh impossible to form a correct estimate of the actual condition of the patient, especially in the face of impending litigation; and when the truth of the statement is admitted, as I believe it deserves to be, that all of the exciting causes of neurasthenia likewise favor the development of hysteria, and that the latter is frequently a conspicuous complication of the former, the far-reaching influence of pros-

pective damages upon the severity and persistence of the symptoms may be the more readily appreciated. Notwithstanding all these very weighty considerations, however, I have not only once but repeatedly seen undoubted cases of severe and protracted neurasthenia result from these causes, alone or combined, when there could be no possible motive for deception.

Now and then cases are met with in which well-marked symptoms have developed independent of exciting cause; cases which, in the present state of our knowledge, may properly be termed idiopathic.

As to predisposing causes, age may be first considered. The active period of adult life furnishes a large majority of the purer cases, mainly because at this time the individual exposure to exciting causes is at its height. Although it does not articulate very nicely with the division of the subject just announced, I will here make the somewhat paradoxical statement that a rather exceptional endowment of systemic qualities, upon which a satisfactory state of the general health depends, has to be presupposed in all cases of neurasthenia; otherwise the influence which finally results in its production would first produce some other sort of disease demanding a corresponding compromise in the diagnostic designation. For as I understand the term neurasthenia, it is only properly applicable when the symptoms cannot be regarded as the result of some other well-recognized morbid entity. However, its associations, if not indeed affiliations, with hysteria are often so intimate as to make any attempt at classification within the limits of established nomenclature unsatisfactory. Now one, then the other, predominates. If cases not manifestly marked with hysteria be excluded, it occurs oftener in men than in women; otherwise I think the order of frequency would be decidedly reversed.

There is a large and perhaps increasing proportion of individuals in every civilized country, mainly among the middle and upper classes, in none of whose organs actual disease can be demonstrated. They are not insane nor yet imbecile; but they lack endurance and stamina to such an extent that they are always more or less dependent on some one, no matter what educational and hygienic advantages may have been extended to them. The condition is permanent. It may have been present from birth, in which event it might properly be regarded as congenital or hereditary; or it may have resulted from some severe disease occurring during the period of development. None of these cases, in my opinion, however neurasthenic, should be included in the present discussion; and if they be ignored, the influence of heredity in neurasthenia is certainly not very marked.

Temperament, in proportion as it prompts the individual to expose himself to the exciting cause, would perhaps have to be reckoned with as an indirect predisposing etiological factor; but when it is remembered that the cases above referred to resulting from shock observe no very marked

discrimination determined by temperamental differences, this element cannot be accorded a very prominent position as a predisponent.

SYMPTOMS.

The symptoms, even exclusive of such associated conditions as hysteria, are sufficiently diversified. For convenience of discussion only, though as a matter of fact they are all more or less intimately combined, they may be separated into motor, sensory, mental and vegetative—if, indeed, it be permissible to speak of digestive and circulative disturbances as vegetative.

Motor.—The purest example of this symptom is seen in the so-called "stale" athlete. His muscles may still appear firm and prominent, but feats of strength and agility which formerly he could repeat in rapid succession and with pleasure, can now, perhaps, be performed once or twice at most, and then only at the cost of distressing effort and subsequent exhaustion. Generally in practice, while motor symptoms are distinct, their prominence is more or less relieved, if, indeed, they are not considerably obscured, by other phenomena, though women frequently enough complain that they are greatly exhausted by making the most simple toilet, walking across the floor or even sitting up. Apart from hysteria the reflexes are more likely to be minus than plus. Intention, tremor and inaccuracy of movement rapidly supervene upon voluntary effort, but there is never true ataxia, spasm or paralysis, nor are the sphincters ever involved.

Sensory.—Unlike its associate, hysteria, neurasthenia presents no pathognomonic sensory symptoms; indeed, none which are very strongly diagnostic. In severe cases rather pronounced numbness of the extremities, extending to the knees and elbows, may alarm the patient until he is reassured, and the same may be said of ulnar paresthesia. The head is pretty generally complained of. The suffering is voted much worse than pain, and many patients express a strong conviction that their brain is paralyzed. This is probably suggested by the vivid sense of mental impotence which supervenes when a sustained intellectual effort is made. A dull, distressing sensation, relieved by pressure, extending from the suboccipital region ("base of the brain") to the lower angle of the scapulæ is very common.

Mental.—Most frequently the first and most troublesome annoyance consists in maintaining the attention while reading. The patient cannot continue more than a few moments with satisfaction. Memory impressions are so transient that the thread of the composition soon separates, and finally, after repeated attempts at concentration, the exercise has to be abandoned. The same is true of other forms of mental effort. Confusion, fatigue and failure ensue when a mental or intellectual process demands nice discernment and extended co-ordination of ideas. Apathy and inability are often combined. The generous perseverance of members of the family to induce the patient to participate in his former mode of diver-

sion may provoke an unexpected display of temper. There may be no more depression than might be fairly set down to the discouragement naturally resulting from conscious incapacity. The simple melancholiac, on the other hand, does not know why he is depressed. He seeks solitude from a strong, innate dread of meeting people, not because he wishes to aviod fatigue; neither is it for the latter reason that his responses to simple questions are delayed or that he shamefully neglects his personal appearance. The neurasthenic may not be able to sit through a play without finally suffering greatly from fatigue, mainly mental. The melancholiac suffers no exhaustion from such an effort, but the performance no longer appeals to him. His capacity for enjoyment in this and all other directions is more or less profoundly reduced, and not, apparently, from a too ready exhaustability of the neurons concerned.

The Special Senses.—Ocular fatigue has already been mentioned. Otherwise disturbances in this direction are not very notable or characteristic. I have met with several cases in this disease in which the sense of smell seemed too strongly accentuated—the patient would get off a car, for instance, rather than pass too near a garbage cart, which I could not, as I might have expected, fairly charge to hysteria.

Vegetative.—In many cases sleep is fairly good. Insomnia in some form occurs often enough, however. It is rarely very severe. Most frequently it is the sort in which the patient falls asleep promptly on retiring, but awakens too soon and then remains awake for several hours. This is perhaps somewhat suggestive of neurasthenia; but long, heavy, unrefreshing sleep without a satisfactory obliteration of consciousness is quite strongly diagnostic of it.

Signs of disordered gastric and intestinal digestion are common, and probably atony of the organs concerned is very often present, resulting in some degree of ptosis in them. An increased tendency to constipation may be expected. Rarely is there diarrhœa. The urinary solids are almost invariably diminished from an eighth to a quarter, and so is the water; apparently without a corresponding variation in the quantity of food and drink taken or discharged by the bowels or sudoriferous glands.*

Sometimes a vague—rarely a more definite—consciousness amounting to a sense of general pulsation disturbs the patient. The arterial tension, if notably changed, is, as a rule, reduced. Cold extremities, increased palmar and axillary perspiration, disturbance of the general thermal sense, and occasional dermography are probably all related to a neurotic disorder of circulation.

TREATMENT.

Severe cases occurring in women, whether complicated with hysteria or not, are most successfully treated by a strict application of the rest-cure, which, for many reasons, cannot be detailed here. A few cardinal feat-

* I have frequently demonstrated a decreased renal elimination in these cases, but have never made accurate estimations in the sweat and fæces.

ures of it may, however, be mentioned. No success can be hoped for unless the patient freely consent for the time being to become the subject of an absolute despotism; a state something like mental hibernation should be encouraged, except that a prevalent air of cheerfulness and hopefulness must be ever present. Absolute rest in bed, milk diet for a few days until a "milk passage" is obtained, and presumably the alimentary tract is in condition for it, then force feeding with massage and aloes (when needed) to promote metabolism and elimination.

Peculiar natural qualifications, both on the part of physician and nurse, are essential to the efficient and not disagreeable maintenance of necessary obedience and co-operation of the patient. At the commencement the physician should make at least daily visits; and altogether, inasmuch as the treatment has to be maintained about six weeks, it involves considerable expense. This last item has led to conditions which certainly need discussion by the profession. In the first place, it may be said, inasmuch as this method was developed and established by Dr. Weir Mitchell, nearly every one who can afford to pay for its thorough application goes directly to Philadelphia, where he not unnaturally expects to get the best service. The result of this has been the establishment of rest-cures in various parts of the country by nurses more or less well qualified for the work, who undertake to supply what they call the rest-cure at popular prices. Mainly because these proprietors believe, and perhaps rightly, that the added expense would prove fatal to their patronage, while stoutly maintaining that they only take cases by medical prescription and treat them strictly under medical supervision, the patient—and the public, too—in some way soon come to understand through them that the services of a physician are superfluous, and govern themselves accordingly. Thus it often happens that many of their patrons never see a physician during their sojourn in these institutions; and, indeed, many go there solely upon the recommendation of lay friends and acquaintances. It is much easier to perceive the numerous objections to this state of affairs than to suggest an efficient remedy for it. I cannot undertake to discuss this subject further in this place.

Among women even there are marked differences, probably depending upon temperament and early training, in the readiness with which they adapt themselves to the rest-cure. Men can almost never tolerate it in its purity. After all, in practice, only a small minority of cases are treated according to this method. Having in mind what ought to be done, we utilize such sources as are available. After determining the course to be pursued, it is essential that the physician secure and maintain absolutely the confidence and obedience of his patient. Sometimes women may be induced to follow directions faithfully in their own homes with great benefit, either with or without the services of a trained nurse. They should have a written schedule supplied to them, and adhere to it strictly. Much outdoor life should be required in most cases, with regular, gradu-

ated exercise and a generous diet, all interspersed with regular and frequent periods of rest. If a fair amount of outdoor exercise can be taken, massage may often be dispensed with. The patient, in taking outdoor exercise, should never get far from a ready resting place. On this account city parks are excellent, as a good seat is always at hand, so that fatigue may be avoided. Besides, the walks are dry, the air fresh, and there is more or less wholesome diversion always at hand.

The neurasthenic business or professional man may shorten his hours. A great deal may be accomplished from ten to twelve and from two to three o'clock, filling in the interim with judiciously appointed rest, outdoor exercise and diversion. Wheeling and golf have done much for this class of sufferers. Men, as a rule, have enough bodily strength to follow these sports in moderation with comfort. A proper sort of vacation usually affords prompt relief. Life in a rough camp or on an Atlantic liner, providing there is an abundance of suitable food, fresh air, diversion and absence of all sources of anxiety, affords ideal treatment for many cases; but it often happens that the time spent in this way is too short, and a relapse occurs.

The physician who, by prolonged observation and careful study of a neurasthenic, correctly estimates his capacity and limitations, and by dint of patient persuasion, education and eloquence induces him to adopt and adhere to a mode of life consistent with the fullest measure of success comfort and happiness possible to him, earns and sometimes enjoys the grateful appreciation of his patient. He never receives compensation at all commensurate with the value of his services.

THE VALUE OF VENESECTION FOLLOWED BY THE SALINE INJECTION IN ACUTE LOBAR PNEUMONIA.*

By William Porter, A. M., M. D., of St. Louis.

DURING the past year my confidence in the methods described at the last meeting in the treatment of lobar pneumonia has increased. Not in all cases, but in all where there is obstructed circulation and, therefore, threatened heart failure, I believe that to advise venesection, followed by the saline injection, is the physician's duty.

It is certainly a logical proposition. The blood is changed by the conditions of disease, and the heart-muscle enfeebled by the same cause. Not only the invaded lung, but the whole system is threatened with stasis. Tonics and stimulants are but slowly absorbed from the prima via: even hypodermic medication loses its potency, and local applications are valueless. It is interesting to remember that a dozen years ago, Maragliano, before

* Read before the Missouri State Medical Association, 1901: an addition to the paper read before the association last year.

the First Congress of the Italian Society of Internal Medicine, maintained that the local inflammatory process in the lung is due to the presence of micro-organisms, while the general symptoms are the result of the pouring into the blood of the poisonous material eliminated by them. Lucatello found that the injection of sterilized blood serum withdrawn from a patient suffering from pneumonia induced pyrexia, while the injection of blood from the same patient, after recovery, gave rise to no symptom whatever.

If in this condition, or to anticipate such a condition of pathologic blood changed from local infection, some agent or method could be introduced which would remove at least part of the toxin, lessen the stasis, render the blood less coagulable and a better oxygen carrier, and make the work of the heart easier, is it not that which we have been looking for all these years?

Let me hastily sketch the phenomena of lobar pneumonia in the average case, keeping in mind that the tendency is always to a hinderance of the circulatory function from the heart to the most distant capillary. The first true stage is that of invasion, not mentioned in the books as a pathological factor, but one upon which, I believe, all the subsequent processes depend. The patient, it may be, already under the depressing influence of lowered vitality from climatic cause, or other predisposing agent, receives the pneumococcus. The invasion is followed by symptoms due to colonization and multiplication of the specific germ. There are days of depression and malaise. Soon this gives place to the so-called first stage, but which is truly the second. There is ptomain poisoning followed by a chill and succeeding high temperature.

Meanwhile local irritation and congestion is determined at the site of the germ invasion, which has steadily been increasing. The inflammatory processes are more rapid, owing to the greater violence of the cause. We have no expectoration in this and the succeeding stage, as in tuberculosis, but we do find the evidences of the pneumococcus in the blood, which is changed from the normal.

All this is indicated by the increased amount of fibrin and the greater tendency to coagulation. Whether the absence of the sodium chloride is due to physio-chemical changes resulting from the specific poisoning is a question yet to be determined.

While the third stage of pathological change is taking place in the lung the abnormal hemic condition increases. It is during this stage that, as a rule, the greater danger is found. Generally, I have observed that the blood from patients in this period coagulates much more rapidly than in any other, and the quick relief that so often comes to the overburdened heart after venesection is only what has been observed by the pioneers in our work.

But removal of part of the blood is only one step toward complete restoration of the circulation to the normal. To stop here is to miss half and, I believe, more than half the effort to save. There is good reason to

believe that the low arterial tension in the early stages is due to the inhibitory action of the toxin upon the nerve-fibers of the capillary walls and blood vessels. With these changes in the vessels and in the blood, the systemic capacity for aeration is lessened.

As mentioned in my former paper, after the injection of the salt solution the toxins are diluted, delirium relieved, and elimination through the sweat glands and kidneys promoted. Not the least of the important results is that the arterial tension is restored. In most of these cases, owing to vaso-motor inability and the condition of the blood before referred to, the arterial tension is diminished, although the quick and irritable impulse suggests the reverse. It must not be forgotten that the blood pressure may be high even without much arterial tension, because of the stasis.

If the argument attempted in this and the former paper has been followed and accepted, it will be understood why the injection of the saline solution should in almost all cases be preceded by the venesection. Several writers report cases of improvement after the injection, but it is the value of the two combined that I am urgent to assert.

I would not under any circumstances advocate this method to the exclusion of all others. The same general care and medication should be used. Mental and physical quiet, heart support, sponging for fever reduction, the cotton-wool jacket, and, where there is pain from pleuritic complication, the chest compress; all these and many other things are to be utilized. It is not a substitute for old and approved methods that I advocate, but an addition. I believe that the whole treatment of lobar pneumonia may be summed up in a brief formula: conserve the strength, guard the heart, and diminish the toxins. While as yet we have no antidote for true pneumonia, yet it is essentially a self-limiting disease, and this element should not be lost sight of. In its care we do not so much aim for immediate as final result. I believe, also, that the mortality is greater than it should be, and that the routine and reckless use of heart depressants in the early stages is responsible for disaster in the later stages. The indication in high temperature and rapid pulse is not to depress the heart but to sustain it while removing, as far as possible, the cause.

The multiplication of case histories would not add weight to the argument. The procedure is growing in favor and will surely become established. I will cite a single case which can justly be regarded as typical.

A salesman, aged forty-six, good physique, was seen on the fourth day after a severe chill. He had been drinking hard and was delirious. Skin dry, temperature 103½°, pulse 126, and no chlorides in the urine. Heart-sounds weak and incomplete. Respiration 40. There was complete dullness and absence of vesicular murmur over the whole of the right lower lobe and a large part of the left. All of the usual evidences of double lobular pneumonia were present. The usual treatment of heart tonics and stimulation had been used without response.

He was at once bled to the extent of twenty ounces, the blood being

very dark and coagulating immediately. Twenty-two ounces of normal salt solution were slowly injected with a noticeable reduction of the urgent symptoms. Six hours after the temperature had fallen to 102°; pulse, 118, and respiration 32, with much less delirium. Chloride of sodium was found in the urine, and the surface of the body became moist. With but little medication the patient made a complete recovery. This was the worst case of lobar pneumonia that I ever saw get well.

It is possible that I may have used venesection with the saline injection in cases in which recovery would have resulted without it, but in the above case no such hypothesis could be entertained. Besides, I have never seen harm from it, but am sure that favorable resolution has been hastened in many instances.

I cannot close without again calling attention to the importance of a differentiation between the specific lobar and the simple lobular or broncho-pneumonia. While the method of treatment described has been of use in the latter form, because of the relief to the overburdened circulation, the most signal results have followed its employment in the form where not only there has been the diminished circulatory disturbance, but a lessening of the specific cause.

3886 Washington Boulevard.

A GENERAL CONSIDERATION OF PULMONARY TUBERCULOSIS, WITH PLEA FOR ITS TREATMENT AT SPECIALLY FITTED INSTITUTIONS.

BY ROBERT M. ROSS, M. D., of St. Louis,

Physician to the Convent of the Good Shepherd; Assistant Physician to Mount St. Rose Sanitarium; Bacteriologist to Alexian Brothers' Hospital.

DURING the past few years much discussion has been indulged in and many volumes have been written about "The Great White Plague"—the scourge of "consumption"—but in view of well-founded estimates that, at the present rate, one-seventh of the whole population of the United States will die of this fearful malady, the widespread consideration it is receiving is not only justifiable, but is demanded. The more advanced thinkers and investigators agree that pulmonary tuberculosis is a preventable and a curable disease. I believe that it may be prevented from attacking an individual who, ordinarily, would certainly fall a victim; and that in many cases an absolute and positive cure may be effected, and that its ravages, even in a well-developed case, may be stayed and life indefinitely prolonged.

Prevention of this disease in those who are likely to contract it requires intelligent, well-directed and long-continued effort at prophylaxis;

and I regret to say that this method of limiting its spread does not, at this time, offer a great deal of hope, because of the deep-rooted tendency in the average American to delay the treatment of a disease until it actually manifests itself; to give his physical condition but little thought until he is actually "sick." We find a proneness or predisposition towards tuberculosis, just as we do towards other diseases, but it sometimes requires skill and sound judgment to detect this; and often it is by no means easy to impress a man with its importance sufficiently to secure his hearty and continued co-operation in carrying out prophylactic measures.

In a consideration of pulmonary tuberculosis as an entity, the question of diagnosis is the most important one, and should receive the physician's first and most careful attention. Now, some one may say, "That's a peculiar statement; there should be no difficulty about making a diagnosis; why, *anybody* can tell when a man has 'consumption.'" I answer yes, perhaps almost any one can, at a certain stage, but when that stage has been reached it is often a matter of little consequence whether a diagnosis is ever made, so far as the final result is concerned. To make a positive diagnosis of tuberculosis when only a small portion of lung tissue is involved, when there is yet no noticeable depreciation of the general condition, when the digestive organs are but slightly affected, and when there is but little cough and perhaps no febrile disturbance, is by no means always easy, and it requires an accurate knowledge of the anatomy of the chest and of the structure and physiology of the thoracic organs.

In all diseases diagnosis is of first importance, since the physician cannot, intelligently, treat a case until he knows what he is treating; but in self-limited diseases an early diagnosis is not always urgent, so far as ultimate results are concerned. Tuberculosis, however, is not a self-limited disease, and for that reason a very early diagnosis is of the gravest importance.

The earlier the diagnosis is made and proper treatment instituted, the greater will be the patient's chances of recovery. I hold that the physician who is not able to diagnose pulmonary tuberculosis in its incipient stages is not a thoroughly competent practitioner. However, many unhappy results have been charged to the incompetence or dereliction of the medical profession that should properly have been charged to the patients themselves or to their friends. Almost any one can recall a case like this: A young woman, previously strong, begins to feel indisposed and to slowly lose flesh, and develops a dry, hacking cough, which she passes by as a mere "cold." The cough continues and some friend, who "once had a cough just like it," recommends some "cough syrup." The cough is stopped, for the "cough syrup" contains opium, but the morbid processes go right on, and the ravages of the disease progressively increase as the patient, slowly growing weaker, confines herself more and more to the house, and closes one air-hole after another out of fear of "drafts." When the physician is consulted, the patient presents a well-developed case of

"consumption," and her chances of recovery have become almost *nil*.

If such a case were diagnosed early and treated properly, through the co-operation of the patient much hope might be extended. Unfortunately, the average case of pulmonary tuberculosis is not unlike the picture here presented—at least the disease is so manifest that the veriest tyro may recognize it—when it comes under the care of the physician, so that the question of prophylaxis is removed from his consideration, and he is brought face to face with a condition which is sapping the most vital parts of the economy, and which, if left alone, will, in nearly every case, progressively increase its ravages until the patient succumbs.

What, then, shall be said as to treatment? There is perhaps no disease for which a greater variety of medicinal therapeutic agents has been suggested and tried. As positive curative means they have all failed; so we have come to look to other remedial agents, and experience has shown that we have not looked in vain.

Having known numerous instances where the individual enjoyed perfect health until an attack of pneumonia, influenza or pleurisy caused a depreciation of his powers of resistance, after which he fell a victim to pulmonary tuberculosis, and having seen his vital forces gradually ebb away until he became exhausted and gave up the struggle, I have come to believe that the question of treatment of the condition is mainly one of nutrition—a staying of the gradual depression of the life forces and securing their return to a normal standard. The term nutrition is here used in its broadest signification, meaning all the activities, taken collectively, which are concerned in supplying the cells of the various tissues of the body with food, in bringing about certain changes in the food and building it up into cell-substance, in liberating from it proper energy, and in ridding the body of the waste material resulting from these processes. In short, the term, as I here employ it, comprises the functions of respiration, circulation, digestion, absorption, metabolism, and excretion.

The man in whom there has been no lapse nor aberration of any of these functions will not contract pulmonary tuberculosis; or, given a man who has already contracted it, his chances of recovery are in direct proportion to the possibility of bringing them back to the normal standard and securing their harmonious and unified action. If a single one of them fail him he is at once in jeopardy, since they are all interdependent.

As to the relative importance of these functions it is hard to determine, but, in the general run of cases, I believe those of respiration and digestion are most important and should receive the physician's closest attention. If these two functions can be restored to approximately normal conditions, the natural tendency is toward a restoration of the others.

In what way, then, may the well-being of these functions be best conserved? A practical answer involves some underlying principles, which have often been observed, but which are daily disregarded, viz.: the greater the departure from nature and from natural principles, the greater

the liability to physical defect and to physical disease; the simpler and more natural are a man's habits of life, the less likely is he to contract disease, of whatever kind, but especially that class to which belongs pulmonary tuberculosis. A man is certainly not in accord with nature's laws when he shuts himself up in a house with numerous fellow-beings, away from the sunshine, and day after day and month after month breathes vitiated and polluted air; nor is the man who sits humped over a desk year in and year out, rarely giving his lungs a chance to expand and fill themselves with pure air from which the blood may extract the oxygen necessary to his vital functions. It is, therefore, not surprising that it is mainly from these and similar classes that the "Great White Plague" gets its victims. On the other hand, it is among the country dwellers, those who are in closest touch with nature, who spend much of their time in the sunshine, breathing the purest air obtainable, that we find the disease least prevalent. And among those who spend practically all their time out-of-doors, in a not too rigorous climate, even sleeping with no covering save blankets and the broad canopy of heaven, pulmonary tuberculosis is a comparatively rare disease.

In the treatment of a disease, it certainly appears rational to begin by placing the patient under those conditions in which it is found the disease is least likely to develop. This, I believe, is the key to the successful treatment of pulmonary tuberculosis. In short, I am an advocate of the so-called "outdoor treatment."

Where and how may the best results be obtained? Much has been written commending this or that place as best for the treatment of this disease, and there is no doubt that portions of Colorado, the foot-hills of the Rockies, the dry sunshiny regions of Arizona, New Mexico and Texas, and the pine slopes of the Florida peninsula possess climatic advantages that are valuable and well suited to certain cases, but many disappointments have been experienced in these places. Just as is the case with patent medicines, the general public hears of the cases that are successfully treated in these resorts but does not hear of the great number of failures. Many tuberculous patients go to these resorts when the disease has so far advanced as to preclude any reasonable hope for relief. Such should certainly never be advised to go, and if possible should be prevented from going. Some failures are doubtless due to the fact that patients go into improper altitudes, and many more to the want of comforts and the sympathy of friends, with the consequent gnawing heartache of nostalgia.

Then, too, some of our most famous resorts are becoming more or less infected with the tubercle bacillus, simply because the large number of sufferers who go there are not placed under any system of sanitary rules or regulations. They come and go at will, expectorate wherever they may please, thus scattering broadcast billions of these micro-organisms. This feature has become so serious that in places the local authorities have considered plans to control the influx of tuberculous people. Such local sani-

tary conditions are certainly not inspiriting to the man who goes to rid himself of this micro-organism and its effects. Another bar to the climatic treatment is that we often find the patient so situated, financially, or otherwise, that he cannot go to some distant part of the country and remain indefinitely.

Much has been said of late in advocacy of the outdoor home treatment of pulmonary tuberculosis—having the patient spend all of his time in open rooms, even sleeping out-of-doors, in some sheltered place. This plan has certain advantages, but in the majority of cases proper measures cannot be carried out at the patient's home (at least they are not), and his diet and habits cannot be properly regulated. The most vital objection is that good air cannot, as a rule be obtained, since a majority of consumptives in the large cities live in thickly populated districts, where the air is not only vitiated, but is polluted with smoke, dust and other impurities.

Since most of these unfortunates cannot go away, and since in many instances it is inadvisable to send them, they must be treated in their own climates—whatever may be said against those climates, much of which, however, I believe to be more fanciful than real.

How, then, shall this be done with the greatest degree of success? Happily, in every State, even in the suburbs of our great cities, there may be obtained comparatively pure air, a goodly percentage of sunshiny days, coupled with scientific regulation of diet, habits and sanitation, and the pleasures of home comforts and the society of friends. These requisites are being obtained and successfully employed in hospitals and sanitaria erected in various places for the treatment of consumptives, and I believe these institutions offer the greatest hope to the majority of this class. Each of our great cities should have within easy reach one or more such places, thus affording to many of its citizens opportunities which they are unable to go away in search of.

There are a number of institutions of this kind in the United States, most of them, however, under private control. Those under private supervision, with but few exceptions, attempt to make themselves self-supporting, and, from the very nature of the case, cannot look after the welfare of the vast number of consumptives that come from our indigent classes, although some institutions are doing much charity work. Great numbers of these annually drift into the general public hospitals, where they not only become a menace to others, but where few of them are ever benefited, since the average city hospital is neither properly situated nor properly constructed for the most successful treatment of pulmonary tuberculosis. States and municipalities should provide institutions for the proper care of this large class of their unfortunate poor. Many of them become public charges anyway, and it would certainly be better to care for them in such a way as would restore some of them to health and make them self-supporting, besides placing them where they are not constantly endangering the lives and health of others.

Suitable public institutions, placed in charge of skilled attendants, would do the community a service of incalculable value in limiting the spread of this dread disease and restoring to health many of its useful members.

Under the newer methods of treatment the medical profession has, almost unaided, achieved some excellent results, as shown by the decreased mortality; but before we can make any great progress toward freeing our country of the blighting influences of tuberculosis, the public authorities, national, State and city, must possess a more accurate knowledge of the disease and have their minds relieved of the idea, now too long and too generally prevalent, that it is incurable. Every State should have its anti-tuberculosis society, affiliated with a national organization, and these societies should admit to membership not only physicians, but representative laymen from all the walks of life, to the end that there may be a general dissemination of knowledge concerning this scourge of the human race.

3861 Russell avenue.

INSULATION COMPLICATED BY LOBAR PNEUMONIA.

By Floyd Stewart, M. D., of St. Louis, Missouri,

Late Major and Surgeon, Second U. S. V. Infantry; Physician to the Clinic for Diseases of the Skin, O'Fallon Dispensary, Medical Department Washington University; Formerly Assistant to the Chair of Dermatology, New Orleans Polyclinic.

THE patient, A. W. S., aged twenty-eight years, splendid physique, does not drink, and had been in good health up to a few weeks previous to this attack. At that time he contracted a cold which would not yield to home remedies. He presented himself at my office on June 28th, and I found a well-developed case of bronchitis. I prescribed and told him to return on Monday, July 1st. He did so—reported that he was feeling much better, but stated he had spent the previous day on the river in a small naphtha launch, going in swimming, etc. As he complained of feeling tired I ordered him to go home and avoid the sun. He did so, but only remained there a few hours when he visited one of the summer gardens.

About 12:30 A. M., July 2d, I was called; found him with a rapid, bounding pulse, face and body flushed, temperature 106 4-5°, rapid respiration; complained of headache, backache, and dizziness.

Immediately applied an ice-bag to the back of the head, ice-cloths to his forehead and began sponging him off with ice-water, also rubbing ice on him. An enema was given which produced a copious action; his temperature fell to 103°, pulse fast but of good character. I allowed him to rest a few minutes with ice-cloths and ice-bag to his head. In a few min-

utes temperature rose to 104 2-5°. An ice sponge bath was again given together with five grains of antipyrin. The temperature fell to 102 1-5°, pulse still 100, but good volume.

In fifteen minutes the temperature went up to 103 4-5°. Again the sponge bath was used together with an ice-water enema and antipyrin. Within twenty minutes temperature 101 2-5°. After an hour it was 102 1-5°. So I left after leaving instructions what to do. I returned within a few hours and found the temperature 100°, pulse 95.

I prescribed a laxative and a mixture containing nux vomica, sweet spirits of niter and solution of citrate of potash.

At 11 A. M. I was informed that the temperature had jumped up to 105°; but following my directions they had reduced it to 104°, then 102 2-5°, and that was the temperature on my second visit, but he complained that coughing gave him a severe pain in the right side; expectoration was free, yellowish in color, the cheeks were still flushed. On examining his chest found large and small moist rales. That evening at 6 P. M. I again called; found him expectorating freely, but a rusty color to the sputum. Respiration 40, temperature 103 2-5°, pulse 100. Ordered the mixture stopped and prescribed strychnine sulphate in 1-60 grain tablets, to be given every three hours; milk and Vichy every two hours. Pain being so severe, gave him five grains Dover's powder to induce sleep and relieve pain—only one being given, as the pain was relieved and sleep followed, which was prolonged for a number of hours.

July 3d temperature 104 1-5° in the morning, right cheek redder than left, intense pain in right side, referred to the right nipple and axilla, sputum more blood than yesterday.

Some dullness over right lower lobe. Respiration 45, pulse 100, good. Continued the sponge baths, strychnine and liquid food. Gave morphine, one-eighth grain, hypodermically, for pain; also citrate of lithia, five grains four times daily in Vichy. Temperature fell a little by noon, but in the evening it was up again to 105°; no change in sputum or pulse.

Dullness perceptible over right lower lobe, lessened movement on that side, respiration hurried and shallow; bronchial respiration could be plainly heard.

July 4th passed a fairly good night, temperature 104°, respiration 40, pulse 100. Evening, temperature 103 2-5°, pulse 100, respiration 32. Milk punches were ordered.

July 5th temperature 103 3-5°, pulse 104, respiration 32; slept fairly well; urine was passed in large quantities, bowels moving freely.

At 4 P. M. temperature 104 2-5°; at 6 P. M. temperature 103 4-5°, pulse 100, respiration 36; sputum very tenacious.

At 2 A. M. July 6th severe chill, temperature fell to 99°, pulse fast and weak, 120, respiration rapid and shallow; hard to arouse patient. Strychnine, aromatic spirits of ammonia and whisky were used rapidly and repeated at short intervals.

At 2:45 A. M. temperature 100°, pulse 110, weak and easily compressible, respiration 36.

At 4 A. M. temperature 104°, pulse 104, still weak, respiration 38. Stimulants were used and repeated when necessary.

At 8 A. M. July 6th temperature 102 3-5°, pulse 100, respiration 32. All day temperature was bounding up and down—104° at noon and 102° at 6 A. M., pulse 96, respiration 32.

At 8 A. M. July 7th temperature 98 4-5°, pulse 84, respiration 36. At noon temperature 99 4-5°, pulse 68. At 6 P. M. temperature 100°, pulse 72, respiration 31.

July 8th, 6 A. M., temperature 97 1-5°, pulse 62, respiration 32. Repeated stimulation failed to raise the pulse, though of fairly good volume.

Stimulants were used freely; between 2 A. M. and 9 A. M. about 1-5 grain of strychnine, four ounces of whisky and two drachms of aromatic ammonia were used; pulse weak and varied from 62 to 68, temperature 97° to 98 1-5°.

At 9:15 pulse 72, temperature 97 1-5°. Hot applications were applied.

Stimulation and heat continued. At noon temperature 97 2-5°, pulse 74, respiration 26. At 6 P. M. temperature 99 3-5°, pulse 74, respiration 24; pulse now of good character and remained good for some time, even when stimulants were stopped until 5:45 A. M. July 9th, temperature fell to 97 3-5°, pulse 64. Profuse perspiration which was controlled by atropia hypodermically in 1-100 grain doses.

Had hot salt sponge baths given, the salt being thoroughly rubbed in, also salt in enemas, but pulse grew weaker and slower; from 62 it went to 60, then to 58 in spite of stimulation.

July 10th pulse showed some improvement in early hours, but fell later in the day to 56, then 54, then 52, then to 48.

July 11th pulse varied 60 to 70, temperature 98°. Nourishment was given every two hours, which consisted of eggnog, milk, broths, and soft boiled eggs.

July 12th pulse varied 60 to 72 but was of good character; temperature varied from 97° to 98 4-5°, sleeping well. At 5 P. M. pulse 72, of splendid volume, and temperature 98 3-5°, respiration 20. A tonic containing iron, quinine, arsenic and caffeine was prescribed.

July 13th temperature normal, pulse 68. Nourishment was given and he was allowed to get up, which seemed to improve him. The sputum lost the rusty color entirely on July 12th and was now a grayish-white, but not profuse. He continued to improve; though the pulse varied it was of a splendid character. He was allowed to get up and move around carefully.

After July 14th he made an uneventful recovery.

The consolidation in his lung began disappearing on July 7th and the entire lung cleared up rapidly.

I wish to call attention to the course of this case. It is interesting to

note that the crisis came on the third day, which, though, is not unusual. Still, only a few cases have been reported, the crisis usually being deferred until the fifth to the ninth day.

I consider that the reason for the early crisis was due to the great heat that the body was subjected to before the complication was noticeable; that instead of being detrimental, the high fever was beneficial, as it produced a condition within the body whereby the antitoxic properties were more readily developed, thereby forming an antitoxin in a shorter space of time than it usually takes.

Osler states: "Fever is not, I think, hurtful; it is not impossible, as some suppose, that fever may be directly beneficial."

Also, to the secondary rise in temperature, the subsequent fall of same, in which it was such a difficult task to keep it up to the normal.

The same can be said of the pulse, which never went up very high, as is usual in croupous pneumonia; and though it was below the usual, repeated stimulation failed to bring it back. The respiration never exceeded 45, which, though not unusual, is rare.

Little medicine was given—none directed toward the pneumonia. Strychnine was the bulwark on which all reliance was put.

Carefully regulated diet and strict attention to the secretions of the body, with careful nursing, brought about a favorable termination.

I take this occasion to again express my thanks to the nurses who were associated with me. This is another case in which herpes labialis appeared and a favorable termination resulted. The significance of this sign to the disease is unknown, but many suppose it to be of a favorable prognosis, and figures have been quoted in proof of this assertion.

REPORT OF A CASE OF LEPROSY.

By Martin F. Engman, M. D., of St. Louis,

Chief of the Dermatologic Clinic, Polyclinic, Medical Department of Washington University,

And A. Faller, M. D., of St. Louis,

WE REPORT this case of leprosy on account of the rarity of the disease in this section of the country, and because we feel that such isolated cases should be brought to the attention of the profession.

On the 7th of last August Ding Dong, a Chinese laundryman, aged thirty-four years, came to the Polyclinic of the medical department of Washington University, suffering with a "skin disease," and was referred to the dermatological department. He claims to have come directly to St. Louis from China ten years ago, and has resided in this city ever since.

The history of the patient was hard to obtain, owing to the proverbial reticence of the Chinese, and that the patient himself spoke practically no English. The interpreter, a countryman who accompanied him, could not or would not enter into his past history.

The patient seemed to be in good general health. Examination of internal organs elicited no evidence of disease. The present eruption, he says, has existed only during the past five months. Syphilitic history

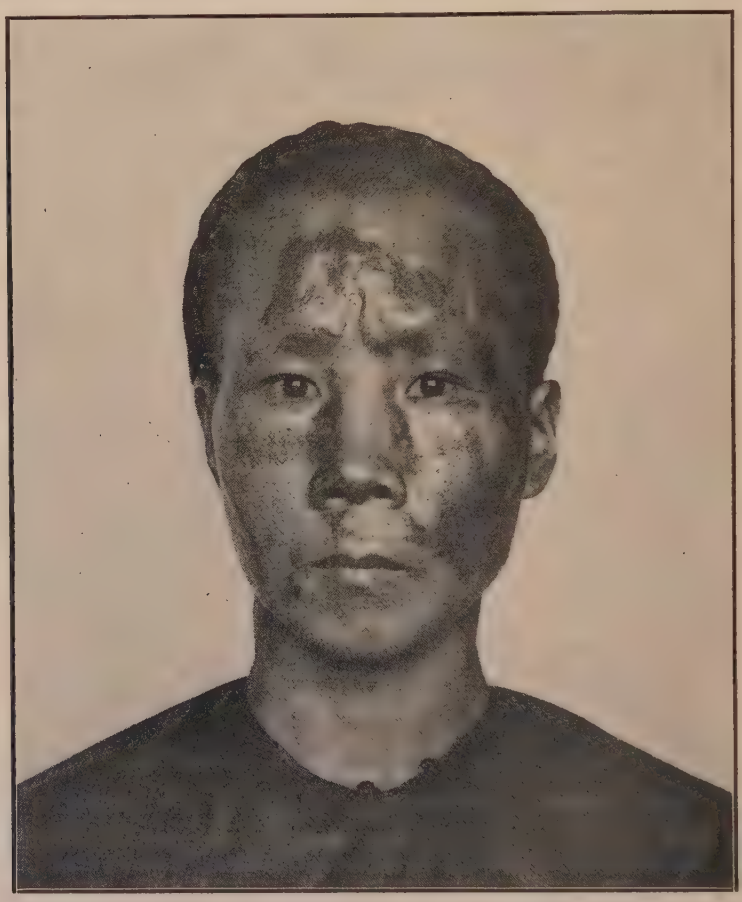

FIG. 1.

was strenuously denied, as was also all knowledge of any previous eruption or indisposition of any description.

Upon the forehead of the patient there is a large, sharply-defined patch with irregular, serpiginous outlines, the border indurated and slightly raised above the surface. The color over the whole patch is deepened. The ears, except the margins, are slightly infiltrated, but not erythematous. Both cheeks are partially covered with a similar lesion to that upon the forehead, but not so greatly infiltrated. The left eye and both sides of the nose are likewise involved, with markedly indurated

borders. The ridge of the nose has so far escaped. The upper lip is partly covered by a raised infiltrated patch. A crescentic scar appears upon the left temple; this is white and sunken. Similar scars appear scattered over the body, probably the remains of former pemphagoid (leprous) eruptions. At the angles of the lower jaw are prominent characteristic plaques. The back and chest are covered by acne papules, but present no lepra lesions. Near the inferior angle of the left scapula is a small lipoma. From the middle of the crest of the ilium on the left side, extending to the vertebral column, occur a multitude of scars, probably the remains of the former bullous leprides. Upon the arms are a great number of round, sunken, pigmented spots about the size of a split pea, and also on the thighs are several round glistening scars.

A large, irregularly-shaped, maculo-serpiginous lepride appears upon both forearms, upper arms and upon ankle and knee of left side. These lesions, as well as those upon the face, are all anesthetic, varying in degree from diminished sensibility to complete anesthesia. There is no marked glandular enlargement. The ulnar nerves are appreciably thickened and slightly roughened, but not painful to pressure. The fingernails as yet are not involved. There is a mutilation of right thumb, probably from accident. The pharynx is greatly congested, also the mucous membrane of the nares.

The diagnosis of macular anesthetic leprosy was made. A piece of cotton on a probe was inserted into the nose and then wiped over several slides; these were stained, after fixing with heat and washing with ether, with carbol-fuchsin and Gabbett's methyline blue solutions After careful search, two lepra bacilli were found.

A piece of skin removed from the border of the patch on the left arm was fixed in formaline, run through alcohol, mounted in celloidin and cut, the sections showing by the carbol-fuchsin-methyline blue method myriads of lepra bacilli, thus confirming the clinical diagnosis (See Fig. 2.) As soon as our diagnosis was made the health authorities were notified and the patient at once turned over to them.

Leprosy is a disease of which we all have an hereditary dread; as it figures so prominently in ancient and biblical literature, we hear of it in our early years and are familiar with its terrible mutilations. It is a comparatively rare disease in our country, but in certain sections it is quite prevalent, especially in Louisiana and Minnesota, in the latter country having been migrated from Norway and Sweden. Now and then isolated cases are reported from various sections, the source of some of these isolated cases being very obscure. The principal interest to all of us is the etiology of the disease.

Since the discovery of the specific bacillus by Hansen in 1879, and shortly afterwards confirmed by Neisser, we know that it is a specific disease produced by a special organism. On account of the great similarity between this bacillus and the tubercle bacillus, it was formerly thought

that they were the same; and this idea was furthermore strengthened by the great number of leprous individuals who died of tuberculosis of the lungs and other organs. But after thorough study with improved methods we know that there is no relation at all between the two bacilli or diseases, only that of secondary infection of leprous individuals by the tubercle bacillus. A large number of such individuals do not die of their leprosy, but various intercurrent diseases, the most prominent being tuberculosis.

The life-history of the lepra bacillus is not known; only in the last few years have successful methods for artificial cultivation been obtained.

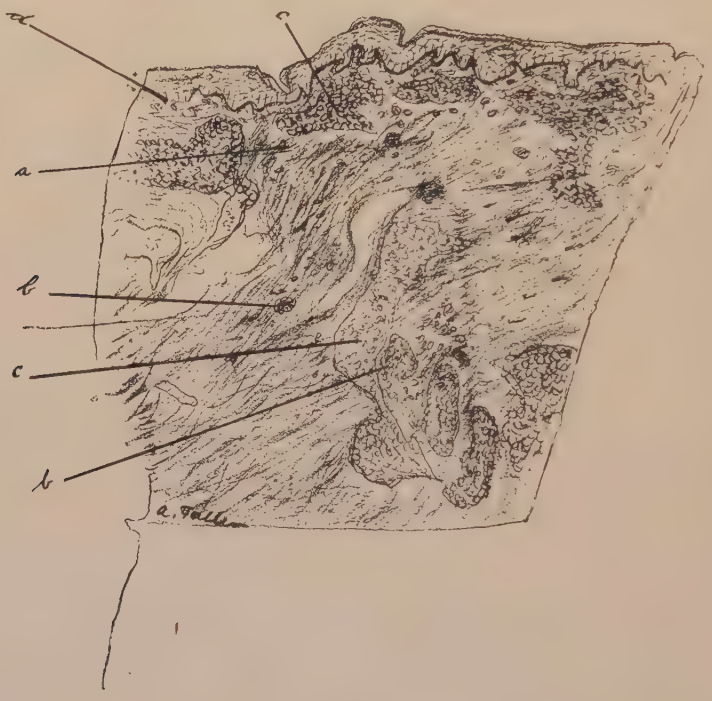

FIG. 2.

Cross-section of skin, stained with Van Gieson-Ernst and Ziehl-Nielson (Leitz, ocular 3, objectives 6 and 12, oil immersion), lepra bacilli showing black, while with above stains they are red, resembling tubercle bacilli.

a Extra-cellular lepra bacilli. *b* Giant cells containing bacilli.
c Infiltration of round cells. *d* Rete Malpighii showing excessive pigmentation.

That the disease can be conveyed directly from individual to individual is probably true. Yet it is no doubt the fact here, as in all diseases due to a special organism, that certain unknown factors or predisposition is necessary for its successful infection.

The hereditary theory has been disproved, as in tuberculosis. Some years ago Dr. Hansen visited the lepers of Minnesota, all of them having been imported from Norway and Sweden, and of leprous families. He found no new cases or any evidence of heredity. Lately Dr. Foster has reported a new case from Minnesota in a boy of twenty years, which is un-

doubtedly one of infection and not of heredity. Dr. Montgomery, of San Francisco, who has had a long and varied experience with leprosy, reports several cases probably infected in California, but all of these cases had been subject to prolonged and intimate exposure to the disease.

Dr. Profeta some years ago subjected himself and some students to actual inoculation with leprous tissue or discharge from leprous sores, without conveying the disease.

In searching the literature carefully, nowhere can a well-authenticated case of direct inoculation be found. In most all of them evidence of prolonged contact is usually the case. But the profession must admit its ignorance upon this fact, for no one can positively state the life-history of this bacillus or its manner or mode of entrance into the human body. Hutchison's theory, that fish were the intermediate hosts, has been exploded. The Japanese think that flies and vermin play an important part (Ashmead).

A few years ago it was brought forward that infection in a great majority of cases occurred through the nares, either by the bacilli gaining entrance with the inspired air or by being deposited there by infected fingers. It is true, in most cases, bacilli can be found in the nasal secretion, or the membranes present some congestion and symptoms there. This being a fact, and if the disease is infectious, the mouth and nasal cavities and secretions are decidedly dangerous, especially so when the disease occurs in an individual with the occupation of our patient. Chinese laundrymen sprinkle their laundered articles with water ejected from their mouths, thus probably throwing upon the clothing (handkerchiefs, napkins, etc.) thousands of bacilli, if they are leprous. If these organisms are infectious, then this is dangerous.

It is very probable that in the next few years leprosy will not be such a rare disease, unless the government takes steps in the segregation and detection of these unfortunates. Since we are now in closer contact with leprous islands (Sandwich Islands, Cuba, Porto Rico, and the Philippines) the need of governmental inspection and segregation is imminent, not only for the protection of the non-leprous, but the leprous themselves. To provide a suitable home for them, where they will be properly cared for and not shut off by themselves in a hut or under lock and key in a prison-room as a criminal before the law, as has occurred several times in this country where isolated cases have been discovered. Think of the inhumanity and horror of such a position! This is probably the future of our case—solitary confinement for life, with only an attendant to share his loneliness. No hope! The Bastile in all its horror!

Of course the community must be protected, but let the government show mercy in providing a proper home.

MEDICAL AND SURGICAL PROGRESS.

SURGERY.

Multiple Hemorrhages of the Face and Conjunctivæ.—Hoppe (*Centralblatt fuer Chirurgie*, July 27th) says that a sudden pressure on the thorax has been known to induce hemorrhages in the face and conjunctivæ. The phenomenon was consecutive to trauma in the nine cases on record, but Hoppe observed a case in which it followed violent itching. The patient, a man of thirty-five, had eaten mushrooms, and, fearing that they were poisonous, tried to vomit them by tickling his throat and retching. All the cases were distinguished by the swollen cyanotic aspect of the face and the numerous hemorrhages, mostly petechial, with transient disturbance of sight.

The Treatment of Complicated Fractures.—Franke (*Archiv fuer klinische Chirurgie*, Vol. 62, No. 4) divides his researches in the treatment of complicated fractures into two parts: those of the extremities and those of the skull. Modern aseptic treatment has made these wounds much less dangerous than they formerly were. In every case he tried to keep the wound aseptic, to put the fragments into good position, to keep up absolute rest, followed after healing by regulated movements. The region of the wound was disinfected, and if the wound was small and contained a foreign body, it was removed; the wound dried out with sterile gauze and a sterile dressing applied. In large wounds counter-incisions, drainage, removal of splinters of bone, etc., followed, but washing out with antiseptics was never done. Large pieces of bone were saved, sharp edges being sawed off first to prevent pressure on the blood vessels and gangrene. When dislocation seemed imminent, bones were sutured together with silver wire. Attempts were made to cover the bone with soft parts. The injection of iodoform and drying with sterile gauze completed the treatment. Immobilization was secured with plaster bandages. Osteoplastic resection was necessary in some cases.

Mechanical Appliances in Gastro-Entero-Anastamosis.—Kelling (*Archiv fuer Chirurgie*, Vol. 62, No. 4) speaks of the prejudices against the use of the Murphy button in gastro-entero-anastomosis. Yet he considers that a good anastamosis button will resemble the Murphy button, for it must remain unchanged until the necrotic intestinal wall has been thrown off and then wholly digested in the stomach or intestines. Kelling has constructed a button from ivory that has been deprived of its calcium. It is in one piece, a cylinder with funnel-shaped ends, covered with rubber, as a protection against the digestive juices. This covering is absent in the

deep outside groove where the stitches will be placed. It is fixed in place by two sutures. A number of experiments with animals are detailed to show its usefulness. For operations on the colon, Kelling has devised a wooden button which he has used in dogs. Kelling has also employed absorbable plates of bone or ivory from which the calcium has been removed.

Colon Tuberculosis.—Hugel (*Archiv fuer Chirurgie*, Vol. 62, No. 4) reports three cases of colon tuberculosis in which operation was necessary. In the first the mass was in the ileocecal region; in the second, in the ilecocecal region, ascending and tranverse colon; in the third, in the right colic flexure. Resection of the affected part of the intestine with anastamosis was performed. Two of the patients recovered, while the other died. Microscopic examination confirmed the diagnosis of all three cases. Hugel believes that the whole of the affected part should be removed. Should phthisis also exist, he believes that all of the intestines should be stripped and the exposed ends of the intestines opened. By ligating the mesenteric vessels leading to the exposed portion of the intestine, certain involution of the tubercular process will follow and perhaps later save resection.

GYNECOLOGY AND OBSTETRICS.

Edited by HUGO EHRENFEST, M. D., Consulting Gynecologist, St. Louis City Hospital.

Gonorrheal Peritonitis in Little Girls.—J. Comby and Gadaud observed three cases of this condition. The symptoms were those of general peritonitis supposed to be due to the rupture of an appendicular abscess. The little patients were prepared for operation; in each case evidence of an acute gonorrheal vulvaginitis was then discovered. The possibility of a gonorrheal origin of the peritonitis was assumed, and a conservative treatment decided upon. All three cases made a rapid and perfect recovery under this treatment. In conclusion, Comby and Gadaud emphasize the necessity of a careful examination of the genitalia in cases of peritonitis in little girls, and warn against a too ready diagnosis of "appendicitis."—*Bulletin de la Soc. Med. des Hopiteaux*, Paris, May 30, 1901.

"The Influence of Pregnancy and Confinement on Phthisis Pulmonum and the Therapeutic Value of Artifical Abortion" is the title of a paper read by Kaminer at a meeting of the "Society for Internal Medicine" in Berlin (June 3, 1901). In his deductions the author says that, while gynecologists are always very conservative concerning the question of artificial abortion, internists hold a different view. Leyden, for instance, has advised abortion in all severe cases of heart and lung troubles. Maragli-

ano considers interruption of the pregnancy necessary in every case of tuberculosis. To bring light on this difficult problem, Kaminer made researches among the patients of the Royal Policlinic in regard to the influence of pregnancy and labor upon tuberculous women. He found that out of twenty-three confinements, fourteen ended fatally. In two cases the confinements were followed by the development of tubercular foci in other parts of the body. He does not agree with Maragliano's extreme radical issue, but thinks, however, artificial abortion is indicated in many cases. As abortion always involves considerable danger, cases of rapidly progressive phthisis may be excluded from this procedure. In *multiparæ* the history of previous labors ought to be taken into consideration. Artificial abortion should be given preference to premature induction of labor. The former operation has been performed in eighteen of his cases, without any immediate unfavorable influence on the patients. One patient died eight, another fourteen months after operation, five later became worse, eleven patients were afterwards enabled to do their work.

In the discussion following this paper Jacob said that he agrees with Kaminer's views about the unfavorable influence of pregnancy on tuberculosis, but he did not get the same satisfactory results from artificial abortion. He thinks more good can be done by preventing tuberculous patients from marrying.

Strassmann emphasizes the fact that while induction of premature birth is a dangerous procedure, artificial abortion is far less hazardous. He considers prevention of conception the best resource. Operative procedures (as excision of the tubes, etc.) advised for this purpose have to be rejected because they involve in tubercular patients a greater risk than abortion. —*Centralbl. fuer innere Mediz.*, June 29, 1901.

Changes and Diseases of the Eye During Pregnancy, the Puerperium and Lactation.—Sandmann prefaces his paper with a consideration of the connection between some general diseases and diseases of the different organs of sense. The relations to diseases of the eye are best known. He limits himself to a discussion of eye diseases etiologically connected with pregnancy, the puerperium and lactation.

1. *Retinitis albuminurica gravidarum* is nearly always caused by the kidney of pregnancy. Visual disturbance is often the first symptom of the general disease. The prognosis of this condition is largely dependent upon the condition of the retinal vessels. Without proper treatment the outcome is unfavorable. The best mode of dealing with this condition is as follows: If the retinitis appears in the later stage of pregnancy and an ophthalmoscopic examination shows only slight alterations in the retina and no changes in the vessels, the end of pregnancy may be awaited. In the meantime the treatment of the nephritis is carried out, and ophthalmoscopic examinations repeatedly made. If the retinitis occurs in an early stage of pregnancy and if there are marked alterations in the retina,

especially in its blood vessels, abortion or premature birth is to be induced immediately. Subsequent pregnancies should be avoided, even by operative means. As a consequence of the tendency to the formation of edema during pregnancy, a detachment of the retina is a frequent complication. Under proper treatment the prognosis of *retinitis albuminurica gravidarum* is favorable.

2. *Ante*, *intra* and *post-partum transitory uremic amaurosis* has been observed. The etiology of this condition is not yet clear, but it appears that toxins, which produce alterations in the kidneys, heart, brain and eyes, are responsible.

3. *Retinitis septica* (Roth) is looked upon by many authorities as a rare variety of *metastatic panophthalmitis*, which is relatively frequent in puerperal sepsis. The prognosis of the latter is very dubious, in view of the critical general disease. Sandmann, however, found two instances of puerperæ suffering from bilateral panophthalmitis, who made a perfect recovery.

4. Finally, the author mentions *neuritis optica* sometimes occurring during lactation. According to Uhthoff's researches, this condition is due to toxines.

Degeneration of the optic nerve may be caused by exhausting hemorrhages. The prognosis of the latter condition is unfavorable; in 90 per cent. of the cases it occurs in both eyes, and terminates in complete blindness in more than 50 per cent. In conclusion, the author states that, according to statistics, pregnancy, the puerperium and lactation are etiological factors in about 0.21 per cent. of all eye diseases, and are the cause of blindness in 0.36 per cent. of the blind of the kingdom of Wuertemberg. Even if pregnancy takes a normal course, changes in the eyes may be observed—*e. g.*, amblyopia, disturbances of accommodation, insufficiency of the *interni* and hemeralopia. Lately Bosse found that beginning with the seventh month of pregnancy a *neuritis optica* occurs in a great number of pregnant women. During the ninth month of pregnancy about 75 per cent. of all pregnant women show distinct signs of this disease, which *post-partum* gradually disappear. Between the third and tenth day after confinement, however, about 50 per cent. still show changes of the papilla.—*Muenchn. mediz. Wochenschr.*, June 25, 1901.

MEDICINE.

Recurrent Hemichorea Treated by Hypnotic Suggestion.—Dr. Paul Faraz reports a case of hemichorea, which had existed for three months, cured in one seance of hypnotic suggestion. The patient, a girl of nineteen years, had her first attack of chorea three years before, when she received a hurried intimation that her mother was desperately ill. It took her six months to recover. This year her mother died. The hemichorea appeared again immediately. Besides, there was marked hemianesthesia, right-sided, as was her original attack, and insomnia. She dreamed a great deal. Faraz made the diagnosis of hysterical hemichorea, and promised to cure her in one sitting. He hypnotized her and promised her that the movements would cease when she awakened. She found this to be true. Faraz showed her that she could move her hands voluntarily. Massage and electricity soon effected a perfect cure. She regained fifteen pounds in weight in two months and is now perfectly well.—*L'Independance Medicale*, No. 22, 1901.

Relation Between the Bile and the Production of Hippuric Acid.—S. Rosenberg (*Centralblatt fuer innere Medicin*, July 20, 1901) investigated the validity of the conclusions recently reached by Zimmermann. The latter decided that when bile was absent from the intestine that benzoic acid no longer produced hippuric acid in the organism through synthesis with glycocol, and that the latter substance is produced from glycocholic acid after its absorption from the intestine. As was to be expected, Rosenberg offers strong proof that these conclusions were at least too far-reaching and probably essentially incorrect. He made a gall-bladder fistula in a dog and allowed the bile to discharge through this, preventing the dog from lapping any of the discharged bile. Probably no bile reached the intestine, and at any rate dog's bile contains but traces of glycocholic acid, if any at all. Yet the urine of the dog contained hippuric acid in considerable quantity after the administration of benzoic acid, while none was found when benzoic acid was withheld. There was not the faintest evidence of absorption of bile into the circulation, so Rosenberg decided that Zimmermann's conclusions were incorrect; and since then he has found that Kuehne and Hallwachs had performed the same experiments with the same results nearly fifty years ago, and that Bunge and Schmiedeberg showed that the injection of benzoic acid is followed by hippuric acid synthesis in frogs, even after extirpation of the liver. He believes that the bile cannot be the only source of glycocol.

The Use of Drugs in Pulmonary Tuberculosis.—W. R. Huggard, in the *Philadelphia Medical Jonrnal* for August 31, 1901, speaks of the treat-

ment of pulmonary consumption by drugs. He states that his line of treatment is determined by the digestive system, by the general health and by the state of nutrition. Persistent pyrexia calls for salol with quinine and arsenic or iron to combat the accompanying malnutrition. Excessive cough and expectoration, showing active softening, call for formaldehyde vapor, creosote and its derivatives, terpen hydrate, etc. In sluggish softening, counter-irritation by iodine or fly-blisters is called for. When an old syphilitic taint is present, its removal should be our first care.

Membranous Colitis.—Charles Douglas (*Journal A. M. A.*, August 31, 1901) reports three cases of membranous colitis, all occurring in infants over six months. He attributes them to bacterial infection, and reports that colon bacillus and the proteus vulgaris were obtained in culture from the membranes—a fact which does not at all suffice to warrant him in concluding that these agents were the cause of the membrane formation.

Leprosy in St. Louis.—During the past month a case of leprosy has been discovered in St. Louis in the person of a Chinese laundryman. An extended article on this case, together with pathological findings, will be found in another part of this issue, written by Drs. Engman and Faller. The main interest about the case is that the individual has been in the city ten years, engaged in his occupation of laundryman. We all know the manner of laundering among the Chinamen—they sprinkle the articles of wearing apparel by forcibly ejecting water from the mouth. The lepra bacillus was demonstrated in the nasal secretion of this man, and it is more than probable that it gains entrance to the mouth from the nose. Just think of the menace to the public health this man has been! It is a rather grewsome thought to consider that leprosy may be found in quite a few of the almond-eyed individuals who glory in the sobriquets of "Sam Kee," "Lum Chum," etc., and who constitute a goodly percentage of our citizens.

Something like a rigid inspection of the Chinese contingent of our cities should be made in order that the disease may be recognized and isolated when discovered. 'Twas by mere chance that this patient came under the attention of experts, who recognized the disease immediately. The case offers a warning to the community and to the public health officials. It is interesting to know that the case referred to will be held in isolation at the quarantine station of St. Louis, the officials finding it necessary to erect a special building and engage a special attendant for the unfortunate Celestial.

OPHTHALMOLOGY.

Edited by JOHN GREEN, JR., M. D.

Post-Partum Metastatic Panophthalmitis.—(W. L. Pyle, Philadelphia, *American Medicine*, vol. i., No. 6.) The rarity of this affection is unquestionably due to the universal adoption of aseptic and antiseptic methods in obstetric practice.

The ocular manifestations occur from the fifth to the fifteenth day after delivery, and may be monolateral or bilateral. Usually there are local symptoms, such as vulvitis, vaginitis, etc., but the affection "may follow an apparently normal labor."

Varieties are described: (*a*) An *acute* form, beginning with loss of vision, injection of the globe, iritis and hypopyon, and developing into a violent, intensely painful panophthalmitis, with rupture of the sclera and infiltration of the orbit; (*b*) a *less acute* form which runs its course without pain or orbital involvement and leads to atrophy of the globe.

Septic emboli (streptococcus pyogenes, staphylococcus pyogenes aureus, pneumococcus, etc.) have been demonstrated in the choroid and retina. The initial lesion is probably a retinitis.

Treatment consists of atropin, hot compresses and scleral incision to evacuate pus, with gauze drainage and irrigation. Enucleation and evisceration are condemned as possibly leading to meningitis.

Death Following Extraction of Cataract.—(A. Trousseau, *Annales d'Oculistique*, March, 1901.) Trousseau believes that a fatal termination following extraction is more frequent than is generally supposed. He acknowledges two deaths, and has had three cases in which the life of the patient was in serious jeopardy. Extreme age (eighty years and over) is deemed of graver prognostic significance than constitutional vice—*e. g.*, diabetes.

Mental disturbance, fear of suffering, anxiety lest the success of the operation be nullified by untimely movements, fear of darkness resulting from the binocular bandage, anxiety as to the final result, fatiguing journeys preceding operation, and change of habits are some of the factors leading to nervous irritability.

Passive pulmonary congestion is favored by prolonged recumbent posture.

Certain deaths are probably purely coincidental. Female, seventy-six years, in excellent health, was operated, without previous warning, on the occasion of her first visit to the clinic. During the night she suffered a cerebral apoplexy, to which she succumbed forty-eight hours later.

Pulmonary congestion was responsible for a fatal termination in an old lady of eighty, in whom there was no suspicion of organic disease. A similar condition was successfully combated in a man of eighty-nine by vigorous stimulation with alcohol.

In conditions of constitutional dyscrasia the operation itself may precipitate a fatal issue. Motais (*Soc. franc. d'Opht.*, 1899) observed two cases of diabetic coma after extraction. Fromaget (*Annales d'Oc.*, March, 1900) gives the history of a uremic intoxication with anuria lasting thirty-six hours, where previous urinalysis was negative.

Unfavorable symptoms following extraction are restlessness, slight delirium, dry tongue, and diminution of urine.

The Use of Sulphate of Copper in Affections of the Cornea and Affections of the Lid Other Than Trachoma (*Med. Rec.*).—After extensive trial, Claiborne is convinced that the cupric sulphate crayon is of very positive advantage in many inflammatory conditions of the conjunctiva and cornea other than trachoma. Particularly amenable to this treatment are cases of persistent superficial keratitis associated with a succulent "velvety" conjunctivitis of the upper lid. Good results also obtained in chronic conjunctivitis with thickened lids and blepharitis, chronic conjunctivitis associated with slit canaliculi and dacryocystitis, "pink eye," follicular disease and "sand" conjunctivitis. Dense corneal maculæ subsequent to recurrent attacks of phlyctenular keratitis cleared up surprisingly.

The therapeutic efficiency of the blue stone is ascribed partly to "irritation," but rather more to "disinfection and cauterization of the lids."

The technique of the application is as follows: A metal probe wrapped with cotton is placed in a bowl of water which the patient holds against the cheek. The upper lid is everted, and the application made to the *under surface of the lid only*. The crayon is similarly stroked across the lower cul-de-sac. The surplus copper is washed with water and removed from the lower fornix with the probe.

No atropin is used at any stage of the treatment.

PATHOLOGY AND BACTERIOLOGY.

Edited by R. B. H. GRADWOHL, M. D., Consulting Pathologist, St. Louis City Hospital.

Lipoma Arborescens.—Michaelow (*Russ. Archiv. der Pathologie, klin. Med. und Bakteriologie*, 1901) says that lipoma arborescens is not a lipomatous growth. It consists of a chronic inflammatory hyperplasia of the synovial membrane. The most frequent cause of this affection is a long-standing tuberculous affection where there has been an absorption of the toxins. The writer describes an operation for the removal of such a growth from the musculus extensor carpi radialis, giving two illustrations of the tumor.

The Artificial Production of Connective Tissue by Means of the Injection of Agar-Agar.—Kramer (*Annals of Surgery*, August, 1901) says that in a search for a substance with which to tampon the thoracic cavity in cases

of penetrating wounds of the chest, it seemed desirable for many reasons to use something which might be introduced in a fluid state but which would solidify at the temperature of the body. With this end in view experiments were made with a neutral four per cent. solution of agar-agar in physiologic salt solution. Injections were made into the thoracic cavities of a number of rabbits, and after stated intervals the animals were killed and the injected mass examined. Microscopic pictures were obtained which showed conclusively that organization had taken place in the injected agar. The writer gives illustrations showing this organization. The process is analagous to the organization which takes place in cases of thrombosis, to-wit: there was first an infiltration of round cells into the mass, followed by the formation of new blood vessels beginning at the periphery. The paper is highly interesting and offers a new field for surgeons in such cases. It may be possible to apply this mothod of injection in the treatment of aneurism in addition to the routine treatment of thoracic wounds.

Specific Blood Changes After the Injection of Urine.—Shattenfroh (*Muenchener med. Wochens.*, July 30, 1901) undertook to determine whether specific blood changes followed the injection of urine from one animal into another. Positive results were obtained by him. Rabbits were injected subcutaneously with urine from man, horses and goats. It was found that the blood serum of rabbits which had received injections of human or goat urine possessed agglutinating properties towards the red blood corpuscles of these animals—*e. g.*, man and goats. Rabbits' serum showed distinct agglutination of human blood, provided the rabbits had received subcutaneous injections of human urine. The blood serum of rabbits which had received injections of horses' urine showed no reaction. The experiments have some bearing on forensic matters, inasmuch as this procedure may be the means of throwing some light on the identification of blood from various sources.

Gonorrheal Endocarditis.—Michaelis demonstrated before the Berlin Medical Society (July 8, 1901) a case of gonorrheal endocarditis, where the gonococcus was found both in cut sections and in pure culture. The case was a man with "fresh" gonorrhea, who entered the hospital with a chill and fever. There was a diastolic murmur over the aorta, and the diagnosis of endocarditis gonorrhoica aortica was made. At the autopsy the heart was cut out with aseptic precautions. Pure cultures were obtained of the gonococcus from the valves. The first case of the disease was reported from Leyden's clinic; since then fifty-five cases have been reported, most of them being gonococci in sections of the heart, some in pure culture.—*Centralblatt fuer innere Medicin*, No. 31.

DERMATOLOGY AND SYPHILIS.

Edited by MARTIN F. ENGMAN, M. D., Chief of Dermatological Clinic, Polyclinic, Medical Department Washington University.

Report of a Case of Corymbose Syphilis.—(By Arthur Whitfield, M. D., M. R. C. P., *Brit. Jour. Derm.*, August, 1901.) The great rarity of this form of syphilitic eruption, and the doubt as to its time of appearance in the course of the disease, have led the author to report the study of this interesting case.

The patient, aged twenty, came for treatment a few days over two months after the initial sore. He was greatly emaciated. He gave no history of tuberculosis, but a strong one of alcohol. The face was of a livid redness, and was covered with enormous papules scattered without arrangement; also upon the scalp, where patchy alopecia had occurred. The lesions were much deeper, larger and more severe than one usually sees so early in the disease. The trunk, limbs and penis were covered with similar papules, while the palms and soles were free. The tongue and lips showed erosions; the throat greatly congested, and the tonsils covered with a fibrinous membrane without ulceration. He was put under specific treatment, and considerable benefit was noticeable until six weeks afterward, when there was noticed this corymbose condition: "Around each large papule on the extensor surfaces of the arms and back there had sprung up a small constellation of miliary papules, most being situated at the orifices of the hair follicles," while the large papules were undergoing central involution.

The interesting point is the time of the appearance of this syphilide and its nature; some authors (Joseph) drawing attention to its microscopic similarity to tuberculous lesions. The author excised a piece and took half for an injection into a guinea-pig, which remained healthy, showing no tuberculous condition. The other half he studied microscopically. The epidermic changes were secondary. At the mouth of the hair follicles there is a horny plug. In the center the chief infiltration is about the hair follicles, sweat-glands, and in the papillary body. About the vessels is the usual mantle of plasma cells. The fibrous tissue is rarefied in the infiltration area. The author finds giant cells, epitheloid cells and lymphacytes, similar to a tuberculous lesion, and remarks: "*It would be quite impossible to distinguish the two diseases from the appearance of the nodule alone.*"

As to the production of the satellite concentric arrangement, the author is more inclined toward the local metastatic theory, as occurs about malignant tumors. (The abstractor has noticed this form of eruption quite frequently in prostitutes.)

Preliminary Note Upon the Injections of Cacodylate Iodo-Hydrargyri in Syphilis.—(By MM. Brocq, Civatte and Fraisse, *Annals de Derm. et de*

Syph., July, 1901.) The cacodylate iodo-hydrargyri is obtained by neutralizing the cacodylate acid of mercury with soda in the presence of iodide of soda. It is soluble in water, perfectly stable preparation, irreducible by light, and gives no precipitate when in the presence of blood serum. The solution is also perfectly limpid and can be preserved indefinitely. 1 c. c. of this mixture contains: 4 milligr. of biniodide of mercury; 4 milligr. of iodide of sodium, and about 3 centigrammes of cacodylate of soda. The dose is 1 c. c. of the solution every day, injected into the upper and inner part of the buttocks.

The conclusions of the authors are as follows:

1. Under the name of cacodylate of iodine-hydrargyri they do not designate a definite salt, but a preparation in which is found associated in a special chemical reaction arsenic, iodine and mercury under the respective forms of cacodylate of soda, iodide of soda and biniodide of mercury.

2. This preparation has the advantage in being soluble in water, sterilizable at 120° C., and is mixable in blood serum without any form of precipitate.

3. The subcutaneous injections are well borne and cause little or no pain, nor abscesses.

4. It is above all indicated in syphilis where there is a denutrition, emaciation or neurasthenia; in the rebellious secondary manifestations of the skin and mucous membranes where there is a complication of seborrhea, and in the tertiary accidents when complicated by disturbances of the digestive tube.

A Case of Salipyrin Intoxication.—(Dr. Alfred Bruck, *Dermatologisches Centralblatt*, February, 1901.) Dr. Bruck reports an eruption upon himself, caused by the ingestion of 1.0 of salipyrin, the drug having been taken for a slight fever which was caused by "taking cold." Three or four hours after taking the drug in cognac and water, he noticed upon the right hand, chiefly upon the interdigital folds and especially between the thumb and the index finger, toward the dorsal side, large red spots, accompanied by very unpleasant burning and itching. The skin was hot and tense without marked swelling. Soon a similar condition appeared upon the left hand. The next morning the eruption had spread perceptibly. Larger and smaller irregular round macules appeared upon the third and fourth fingers of both hands and upon their dorsal surfaces. Upon the volor side small patches appeared in the corpo-metacarpal region. Symmetry was very marked. At other parts only the inner surface of the lips and glans penis were attacked. Upon the penis the eruption showed a preference for the dorsal surface, as was apparent upon the hands; here the objective symptoms were not as prominent as upon the hands.

The following day the process upon both upper extremities was still

spreading and the burning and itching were more intense. Herpetic vesicles formed upon the glans penis, especially in the sulcus.

The temperature was very slightly increased; pulse somewhat rapid; patient felt weak and giddy. One gram of phenacetin was now given and a menthol salve applied. The redness rapidly subsided while the vesicles became dry and scaly, recovery being rapid and complete.

A Case of Acne Keratosa.—(H. Radcliffe Crocker, *Brit. Jour. Derm.*, August, 1901.) This is a disease of which Dr. Crocker has written a great deal in the last few years. He adds another case to the list: Miss F., aged thirty, had had the disease seven years. The lesions occur chiefly upon the cheeks as red, hard, flattish swellings the size of a finger-nail, surrounded by smaller ones of the same type, attended by great heat and itching, compelling her to pick them to get out a "white core," of which there were often two or more. When these came out she got relief, the lesions promptly healing.

Treatment of Ring-Worm With Mono-Chlorphenol.—(M. Barbe, *Annal. de Derm. et de Syph.*, July, 1901.) Barbe has for a long time employed this remedy in ring-worm and extols its efficacy. The solution (20–100) should be applied once a day for several days. It cures the plaques of ring-worm without desquamation or that intense brown discoloration caused by the use of iodine, two advantages not to be overlooked in the treatment of a disease which so often occurs upon exposed parts of the body. There is only slight smarting and redness at the moment of its application.

A Case of Leprosy.—(Burnside Foster, M. D., *Jour. Am. Med. Asso.*, August 31, 1901.) The chief reason the author has for reporting this case is that he desires to put it on record as the only case of leprosy known to have been born in the State of Minnesota or in that part of the country. He remarks: "You are all familiar with the statement, so frequently made, that all the cases of leprosy in the Northwest have their origin in some leprous district of some other country, and that for some unexplained reason the disease was never communicated to others here, although there has been abundant opportunity for such communication. This case puts the matter in a new light."

The patient, twenty years of age, was born in Minnesota, and has never been out of the State. His father, two sisters and one brother are living and well. The other brother died of leprosy. This brother had been nursed in infancy by a woman who had two leprous brothers.

BOOK REVIEWS.

Davis's Obstetric and Gynecologic Nursing. By E. P. DAVIS, A. M., M. D., Professor of Obstetrics in Jefferson Medical College and Philadelphia Polyclinic. 12mo, volume of 402 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Price, $1.75, net.

This volume is designed to furnish instruction as to the various duties of the obstetric and gynecologic nurse. Obstetric nursing demands some knowledge of natural pregnancy, and of the signs of accidents and diseases which may occur during pregnancy. It also requires knowledge and experience in the care of the patient during the labor and her complete recovery, with the needs of her child. The obstetric nurse must also know how to help patient and doctor in the accidents and complications of labor, and has an important part to play in caring for mother and child in the diseases which occasionally attack them during the puerperal period. Gynecologic nursing requires special instruction and training, and a thorough knowledge and drill in asepsis and antisepsis are absolutely indispensable. These points are all well attended to in this book, which is a complete and satisfactory volume.

Sexual Hygiene. Compiled from books, articles and documents, many not heretofore published. By the Editorial Staff of the Alkaloidal Clinic. 270 pages. Price, $1.00, post-paid. Published by the Clinic Publishing Co., Ravenswood Station, Chicago, Ill. 1901.

This important subject is reviewed and discussed under the following chapter headings: Preliminary Considerations; The Physicians' Club; Religion and Love; Sexual Frauds; Sexual Excesses; The Effect of Coitus During Pregnancy and Lactation; Sex Problems in Education; Legal Aspects; Educational Aspects; Editorial Résumé; Woman Sexually; Imperfect Development of the Female Sexual Organs; Affections of the Male Sexual Organs Causing Impotence; Continence; Masturbation; Incomplete or Delayed Intercourse, etc.

This book contains a number of papers read before the Physicians' Club of Chicago, many of which have never before been published. It goes into the subject at length, and gives information on matters of sex that could not be obtained in any other book, as the subject-matter has never before been published. The psychical side of the question is well treated. No physician should fail to keep himself informed on this subject. It involves questions which come up day after day in medical practice. Krafft-Ebing has given us in his Psychopathia Sexualis an extensive consideration of this subject. This volume, Sexual Hygiene, goes into the matter in a different way, aiming to show the relationship between this subject and

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Atlas and Epitome of Labor and Operative Obstetrics. By DR. O. SHAEFFER, of Heidelberg. From the fifth revised German edition. Edited by J. Clifton Edgar, M. D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, $2.00, net.

This volume of Saunders' medical hand atlases deals with normal and pathological labor and with all the obstetrical operations. It forms a combination and completion of the atlas reviewed above. This volume will prove of special value to the practitioner who neither during his college course nor subsequently has had the opportunity of observing many of the relatively rare pathological obstetrical cases. Excellent illustrations give instructive pictures of all the possible normal and abnormal conditions in obstetrical practice. Concise data enable the physician to understand clearly the condition he has to deal with. Numerous illustrations show him how to perform the necessary operation.

These two atlases, which include the whole domain of obstetrics and contain more than three hundred splendid illustrations, have gained a prominent place as practical manuals in Germany. We venture to say that the careful English translation of J. Clifton Edgar, M. D., will before long enjoy a like popularity and esteem in America.

Studien fuer Geschichte des menschlichen Geschlechtslebens. Das Geschlechtsleben in England mit besonderer Beziehung auf London. By DR. EUGEN DUEHREN. Published by H. Barsdorf in Charlottenburg, Berlin. Vol. II. 445 pages. Price, 10 marks.

The aim of the author is to give in consecutive form a picture of human culture in so far as it pertains to the sexual life of the different nations. The first volume, published previously, deals with the conditions in France; the present volume with the conditions in England in general and London in particular. In the preface Duehren gives the views of Milton, Kant, Taine, etc., on the cause of the sexual peculiarities observed in the English race. These are considered from two standpoints, viz., marriage and prostitution. A number of important phenomena are alluded to by the author, who everywhere shows a familiarity with the world's literature. He has collected the opinions of many prominent writers, thereby avoiding to a large extent a too subjective consideration of the problem.

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Maltine with Creosote.—The writer has used this combination of creosote with maltine in both private practice and in the wards of the St. Louis City Hospital, and regards it as one of the most useful of the maltine series.

Creosote is a drug which requires special care in its administration, and must be given in a vehicle which will counteract its disagreeable features. Maltine makes just such a desirable vehicle. The creosote is made more palatable and is more readily assimilated when combined in this way. In addition to this, the strengthening and tissue building elements of maltine come into good play in all diseases where creosote is indicated.

The writer has made extended use of this preparation in a variety of cases and has had excellent results therefrom. A few cases are here appended.

CASE 1.—M. F., laborer, aged 47 years; has had chronic bronchitis for a number of years, especially severe each winter. When first seen he had been unable to work for two months and was confined to his bed most of the time. Had severe cough with copious expectoration. He has been gradually losing strength and weight and has been having drenching night-sweats. Examination of lungs showed evidences of diffuse bronchitis and infiltration of left apex. A few tubercle bacilli were found in the sputum.

He was put on full doses of maltine with creosote. Improvement was gradual but satisfactory. His cough became much less severe; he improved in weight and strength, and night-sweats ceased. At the time of last examination he was able to work and was, in short, enjoying better health than he had enjoyed for years.

CASE 2.—T. J., aged 24 years; history of scrofulous diathesis; had been troubled for several years with an abnormal frequency of micturition, the act being usually followed by a stinging, sharp pain. General health was not good. Examination of prostate showed some enlargement, with small nodules scattered over the surface. A diagnosis of chronic tubercular prostatitis and cystitis was made. After three months' administration of maltine with creosote there was marked improvement in the general health of the patient, and his urinary symptoms were almost entirely gone.

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of the disease. In those unfortunate cases where no cure could be expected, the results were nevertheless very gratifying in the alleviation of distressing symptoms. Another case coming under the writer's observation in the City Hospital might be cited. The patient was a man of forty years, who had been suffering with an attack of grippe-pneumonia. After the subsidence of the acute symptoms it was found that his left apex showed signs of tubercular involvement, as later sputum examination showed the presence of tubercle bacilli. His condition was extremely deplorable, there being marked emaciation, weakness and a hacking cough. He was put on the maltine with creosote, and at the end of the month during which he was under the writer's observation, he had picked up six pounds in weight and was in a far better state than he had been before the institution of this medication. As a routine prescription in all cases of tuberculosis and in many other diseases, especially of the respiratory tract, maltine with creosote will be found most valuable.

Pepto-Mangan (Gude).—(Abstract of a report by H. D. Peterson, M. D., Chicago, Ill.) Iron in any form acts upon the human system in three ways: First, by increasing the oxygen-carrying power of the red blood corpuscles. Second, by changing the oxygen in the tissues into ozone. Third, by its general astringent effect.

Iron acts not only as a food to the tissues, but is at the same time a stimulant, and by this effect upon the blood-making organs it increases the number of red corpuscles. It also stimulates the heart muscle and slightly contracts the arterioles, in this way increasing blood pressure.

Its general effect is tonic and is, therefore, very useful in cases of general debility.

It constitutes an important part of the blood, and by diminution of its proper proportion will produce ill effects, as shown, for example, by anæmia. When any such ill results occur we seek to restore the balance by supplying artificially the lacking element. The methods which will nearest approach nature's efforts are those which recommend themselves as best for adoption. Gude's pepto-mangan seems to meet the requirements as well as any preparation of iron, as it is nearest to the form found in the blood. It is a neutral solution of iron and manganese, two well-known restoratives, and recommends itself in that it is easily absorbed by the digestive tract without any disturbance of the same, is not injurious to the teeth, and produces no constipation.

The indications for its use are the same as for any preparation of iron, viz.: anæmia, constipation, dysmenorrhœa, etc. Not every case treated with iron, regardless to the form or preparation used, is brought to a successful termination, as in many such there is some condition which prevents proper action, viz.: weak or irregular digestive tract. On account of its mild action Gude's pepto-mangan acts so well, these conditions being themselves indications for iron. The following cases are illustrative

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of its value as a restorative. In these cases the Thoma-Zeiss hæmocytometer was used to count the corpuscles.

CASE 1.—Ellen C., aged twenty-eight, married five years. She was confined three months ago, after a prolonged, exhausting labor. So much blood was lost that she was left in an extremely anæmic condition. She improved so very slowly that four weeks ago she was placed upon Gude's pepto-mangan in one-drachm doses, in milk, three times a day. The blood count at commencement of the treatment showed 2,600,000 red corpuscles to one c.m. The first sign of improvement was redness of the lips and better appetite. She soon began to gain in strength and flesh, and one week ago the red corpuscles had increased to 3,700,000 in one c.m. She now says she feels as well as ever, and her appearance would warrant the statement.

CASE 2.—General anæmia in a young girl of sixteen years. When first seen she was pale, thin, and was badly constipated. There was almost constant headache, and she had but very little appetite. She first menstruated at her fourteenth year, but has not been regular for over a year. The corpuscle count was 3,000,000 to one c.m. Gude's pepto-mangan in drachm doses three times a day, in milk, was given for a period covering four weeks. In two weeks after beginning the treatment she began to have some color in the lips, and from that time on rapidly improved in all symptoms, and now has no trouble except with the menstrual function. The blood at last count, one week ago, was 4,000,000 to one c.m.

CASE 3.—Geo. W., aged twenty-seven, typesetter. Has not felt well for the past year. Is badly constipated, has a feeling of lassitude, headache most of the time. Poor appetite, tongue flabby, pale, and thickly coated. Blood count 2,800,000 to one c.m. Four weeks of treatment with Gude's pepto-mangan has caused a marked improvement in his condition. He feels much stronger, and can do his work without the fatigue formerly experienced. The appetite is much improved, and his tongue is clear. Blood count now shows 3,600,000 red corpuscles to one c.m.

CASE 4.—Edward C., aged fifteen, office boy. When first seen he was very thin and pale, lips almost colorless. Complained of shortness of breath and palpitation on hurrying upstairs, as he was often required to do. Gude's pepto-mangan in drachm doses three times daily caused very rapid improvement. He has gained in weight and color, and has more appetite. After three weeks' treatment blood count showed an increase from 2,800,000 red corpuscles to 3,200,000 in one c.m. He is still under treatment.